BAKOM OFCOM UFCOM

Divisione Servizi di telecomunicazione – TC
Sezione Economia e statistica - ECOSTAT

Il mercato svizzero delle telecomunicazioni nel confronto internazionale

Estratto del X rapporto d'implementazione dell'Unione europea esteso alla Svizzera

Bienne, luglio 2005

Introduzione e ringraziamenti

Già da diversi anni, la Commissione delle Comunità europee pubblica una comunicazione annuale indirizzata al Consiglio, al Parlamento europeo, al Comitato economico e sociale europeo e al Comitato delle regioni. Il documento si prefigge di fare il punto sull'attuazione della regolamentazione dell'Unione europea in materia di comunicazioni elettroniche. L'ultima edizione di questo rapporto, il cosiddetto X rapporto d'implementazione dell'Unione europea, è stata pubblicata nel dicembre 2004[1].

Oltre a un esame circostanziato della situazione normativa nell'Unione europea e nei Paesi membri, questo rapporto fornisce, nel suo allegato 1, un'enorme quantità di informazioni sulla situazione del mercato delle comunicazioni elettroniche nel 2004 e sull'evoluzione osservata tra il 2003 e il 2004. Oltre a descrivere il mercato delle telecomunicazioni in modo molto completo, i dati statistici forniti in questo allegato hanno il merito di fondarsi su metodologie unificate e trasparenti che permettono paragoni pertinenti tra i Paesi esaminati.

Essendo la Svizzera geograficamente, economicamente e culturalmente situata al crocevia dell'Europa sarebbe stato un peccato non comparare ed esaminare anche il nostro Paese. Per questo motivo ci siamo simbolicamente e materialmente "invitati", laddove è stato fattibile, nell'allegato 3 del X rapporto d'implementazione. Non metteremo sicuramente in ombra i nostri vicini, poiché ammettiamo modestamente che senza i loro sforzi niente sarebbe stato possibile. Per questo motivo ringraziamo in modo particolare il signor Carlos Perez Maestro, amministratore alla direzione generale della società dell'informazione, per il suo prezioso e costruttivo sostegno.

Il presente rapporto si prefigge dunque di comparare i Paesi membri dell'Unione europea e, all'occorrenza, il Giappone e gli Stati Uniti, in base all'allegato 3 del X rapporto d'implementazione dell'Unione europea, e di fornire cifre il più possibile esaurienti della situazione sul mercato svizzero delle telecomunicazioni nel 2004. A tale scopo sono state rigorosamente applicate le diverse metodologie elaborate dalla Commissione europea. Precisiamo che i testi in corsivo sono estratti direttamente dall'allegato 3 del X rapporto.

Il presente rapporto è disponibile soltanto in inglese. La sintesi esiste tuttavia in francese, italiano, tedesco e inglese.

[1] Comunicazione della commissione al consiglio, al parlamento europeo, al comitato economico e sociale europeo e al comitato delle regioni, La regolamentazione e i mercati europei delle comunicazioni elettroniche, 2004, COM(2004) 759 finale, Bruxelles, 2.12.2004.

Sintesi

Valore del mercato (capitolo 1)

Nel 2004, il valore del mercato svizzero delle telecomunicazioni (compresi i servizi della TV via cavo) ammonta a 7,6 miliardi di Euro, il che situa la Svizzera al decimo posto della classifica dei Paesi dell'Unione europea. Il nostro Paese si colloca dietro la Svezia (8,28 miliardi di Euro) e il Belgio / Lussemburgo (8,074 miliardi di Euro), ma davanti all'Austria (6,397 miliardi di Euro). Inoltre, sul mercato svizzero delle telecomunicazioni, l'EITO[2] prevede un incremento dell'ordine del 2% nel 2005, ossia una crescita inferiore a quanto previsto per i Paesi membri (+4,3%). L'impulso dovrebbe giungere essenzialmente dal mercato dei servizi di telefonia mobile e dai servizi di dati su rete fissa. I mercati della telefonia fissa e dei servizi via cavo TV dovrebbero invece rimanere relativamente stabili. Nel 2004 il mercato svizzero delle telecomunicazioni è segmentato come segue: 47% per i servizi di telefonia mobile, 25% per i servizi di telefonia fissa, 17% per i servizi dati su rete fissa e 11% per i servizi via cavo TV.

Fornitori di servizi di telecomunicazione su rete fissa (capitolo 2)

Analogamente a quanto accaduto nei Paesi dell'Unione europea, anche in Svizzera si è assistito ad un vero e proprio afflusso di fornitori di servizi di telecomunicazione durante la prima fase della liberalizzazione (+112.6% tra 1998 e 2001). A partire dal 2001, la tendenza si è rovesciata; è stata infatti registrata una leggerissima flessione (-2.1% tra 2001 e 2003). Nel 2004 il numero dei fornitori è aumentato del 20%, riflettendo così la forte ripresa d'interesse.

Nell'agosto 2004, la Svizzera conta un totale di 127 operatori titolari di una concessione, cioè autorizzati a esercitare una rete pubblica, e 145 operatori abilitati a proporre servizi pubblici di telefonia vocale. Queste cifre, relativamente elevate date le ridotte dimensioni del nostro territorio, situano la Svizzera nel primo quarto della classifica dei 25 Paesi europei. Osserviamo che, da agosto 2003, il numero di operatori di rete pubblica è aumentato del 10,4% mentre quello degli attori sul mercato della telefonia vocale è aumentato del 31,8%. La cifra elevata di operatori in grado di fornire servizi pubblici di telefonia vocale non deve far dimenticare che si tratta unicamente di un'indicazione sul potenziale di concorrenza. In realtà la situazione è meno netta poiché soltanto 36 operatori su 127 sono veramente attivi sul mercato, ossia poco più di uno su quattro. Questo dimostra che le procedure amministrative e le risorse finanziarie permettono di ottenere facilmente l'autorizzazione di esercitare un'attività sul mercato svizzero.

Qualora si volesse valutare la situazione concorrenziale sul mercato della telefonia vocale, può essere utile completare i dati presentati sopra con il calcolo della quota di mercato combinata. A tale scopo occorre tenere presente che questo indicatore esprime il numero di concorrenti che si divide il 90% o più di un determinato mercato. In maniera generale, la grande maggioranza dei Paesi dell'Unione europea non ha più di quattro concorrenti importanti sul mercato della telefonia vocale. Con i suoi tre operatori, la Svizzera si situa dunque nella media. Tuttavia esiste un potenziale di miglioramento poiché in Paesi come Svezia o Regno Unito sono almeno 9 gli operatori che detengono oltre il 90% del mercato.

Le quote di mercato guadagnate dagli operatori alternativi forniscono pure indicazioni fondamentali su come è radicata la concorrenza e sull'intensità del suo sviluppo. A questo proposito, si nota che

[2] Osservatorio europeo delle tecnologie dell'informazione (2004) : European Information Technology Observatory 2004, Francoforte s/M., Germania; vedi www.eito.org.

in Svizzera le quote di mercato dell'operatore storico, espresse in percentuale della cifra d'affari sulla rete fissa, si situano nettamente al di sotto delle medie stabilite per i 15 Paesi dell'Unione europea e questo vale per tutti i segmenti del mercato esaminati. Le seguenti cifre, rilevate per il mese di dicembre 2003 ne sono la prova:

Segmenti	Quote dell'operatore storico svizzero	Quote medie degli operatori storici dell'UE
Chiamate nazionali (locali e interurbane)	65.7%	72.1%*
Chiamate internazionali	48.4%	59.9%
Chiamate verso le reti mobili	61.9%	66.5%

*Media semplice (locale + interurbane / 2)

Nel nostro Paese, l'evoluzione delle quote di mercato osservata tra dicembre 2000 e dicembre 2003 diverge nettamente a dipendenza dei segmenti considerati. In effetti, se la quota di mercato dell'operatore storico nel segmento delle chiamate dalla rete fissa alle reti mobili è diminuita in modo significativo, il peso relativo dell'operatore storico è tuttavia leggermente aumentato per quanto concerne le chiamate nazionali e internazionali.

Ad ogni modo, sia che si tratti della Svizzera o dei paesi dell'Unione, ci si può soltanto stupire dalla divergenza notevole e persistente esistente tra le quote di mercato dei diversi segmenti in esame. La presenza di queste differenze sembra indicare che il potenziale di crescita della concorrenza non sia ancora totalmente esaurito per certi segmenti del mercato.

Scelta dei consumatori sul mercato delle comunicazioni sulla rete fissa (capitolo 3)

Sia in Svizzera che nei Paesi dell'Unione europea, dalla liberalizzazione in poi, gli utenti hanno a disposizione una vasta gamma di operatori in grado di offrire loro servizi di telefonia vocale.

Per quanto concerne l'utilizzo concreto di queste nuove alternative, rileviamo che in Svizzera per le chiamate nazionali o internazionali, il 34,6% degli utenti ricorre ad un nuovo arrivato, cosa che corrisponde pressappoco alla media europea stabilita per agosto 2004 (31,1%). Per le comunicazioni locali,il 31,5% degli utenti ha optato per un operatore alternativo, ossia l'11% in più rispetto ai Paesi dell'Unione europea (Ue15).

In merito ai collegamenti d'utente, la Svizzera presenta qualche divergenza con i suoi vicini europei. In effetti, se in media il 6,5% degli abbonati europei ricorrono a un operatore alternativo per i suoi collegamenti, nel nostro Paese è soltanto lo 0.6% a farlo. Se ne deduce quindi che, alla data considerata, gli utenti svizzeri non disponevano praticamente di nessuna possibilità di scelta. La situazione dovrebbe tuttavia migliorare sensibilmente se si concretizza la liberalizzazione dell'ultimo chilometro e grazie al lancio su vasta scala dei servizi telefonici su reti cablate.

Interconnessione (capitolo 4)

Come già più volte sottolineato, il livello delle tariffe d'interconnessione ha un ruolo importante per le possibilità dei nuovi venuti di accedere al mercato in condizioni eque e per l'intensità della concorrenza esercitata tra i diversi fornitori di servizi di telecomunicazione sul mercato. L'interconnessione deve pertanto restare una preoccupazione primordiale delle autorità di regolamentazione.

Per tutti i servizi d'interconnessione considerati in questo rapporto, segnaliamo soltanto che le tariffe svizzere sono elevate rispetto alla media europea.

In Svizzera, contrariamente ad altri Paesi europei non esiste un'interconnessione locale tra le reti fisse ma soltanto un'interconnessione regionale e nazionale[3].

Nonostante una diminuzione dell'13.2% della tariffa per l' interconnessione regionale tra il 2003 e il 2004, la Svizzera è uno dei Paesi più cari, senza tuttavia raggiungere i livelli di Lituania, Lettonia, Slovacchia e Malta. La tariffa per la terminazione delle chiamate d' interconnessione regionale oltrepassa la media europea ponderata (23%).

Malgrado un abbassamento del 9.9% della tariffa per la terminazione delle chiamate d' interconnessione nazionale, la Svizzera si trova al nono posto nella classifica dei Paesi più cari, tra cui i quattro Paesi sopraccitati. In questo caso, la differenza con la media stabilita per i Paesi membri dell'Unione europea è meno netta ma non trascurabile poiché ammonta in ogni modo al 17.5%.

Per quanto concerne il livello delle tariffe d'interconnessione sulle reti fisse, rileviamo che a seguito di due procedure avviate dalle società TDC Switzerland SA (Sunrise) e MCI WorldCom SA, in una decisione del 7 novembre 2003, la Commissione federale delle comunicazioni ha ingiunto a Swisscom SA di procedere retroattivamente ad un abbassamento dei prezzi dell'ordine del 25% - 35% per gli anni 2000 a 2003. Swisscom SA ha interposto ricorso contro questa decisione per sapere se le tariffe d'interconnessione sono effettivamente troppo elevate o meno. Nell'ottobre del 2004 il Tribunale federale ha deciso di rinviare la causa alla ComCom, che ha ribadito l'ordine di grandezza della diminuzione di prezzo. È possibile interporre ricorso contro questa decisione.

Infine, esaminando le tariffe d'interconnessione per le terminazioni delle chiamate sulle reti mobili, occorre constatare che nel 2004 gli operatori di telefonia mobile attivi sul mercato svizzero praticano prezzi fra i più alti d'Europa, nonostante una diminuzione significativa registrata tra il 2001 e il 2002 (-21%). Con una tariffa d'interconnessione ponderata di 22.72 centesimi d'Euro, la Svizzera oltrepassa la media ponderata europea (Ue15) (54%). Nel 2004 nessun altro Paese pratica prezzi più elevati. È interessante notare che la tariffa d'interconnessione per la terminazione delle chiamate su reti mobili è in media oltre 12 volte superiore alla tariffa di terminazione di transito doppio da rete fissa a rete fissa. A livello europeo (Ue15) questo rapporto è di 9 a 1 se si considerano unicamente gli operatori designati dalle autorità nazionali di regolamentazione come dominanti sul mercato e di 11 a 1 se si considerano solo gli altri operatori.

Rileviamo inoltre che il livello elevato delle tariffe di terminazione richieste dagli operatori svizzeri di telefonia mobile non ha lasciato indifferenti le autorità di regolamentazione del nostro Paese. A questo proposito va ricordato che, il 15 ottobre 2002, la Commissione della concorrenza ha aperto un'inchiesta contro Orange, Swisscom Mobile e Sunrise, di cui si aspettano le conclusioni.

Mercato della telefonia mobile (capitolo 5)

Nell'agosto del 2004, il tasso di penetrazione della telefonia mobile ammonta all'87%, quota che corrisponde esattamente alla media ponderata dei Paesi dell'Unione europea (Ue15). Tra il 2003 e il 2004, il tasso di crescita della telefonia mobile in Svizzera era leggermente superiore alla media europea (6.1% contro 5.7. Segnaliamo inoltre che in Europa (Ue25) quattro Paesi hanno

[3] L'Unione europea utilizza il termine "simple transit" quando parla d'interconnessione regionale e "double transit" quando parla d'interconnessione nazionale. Nell'allegato utilizzeremo la terminologia dell'Unione europea.

oltrepassato la soglia del 95%, ossia Italia (98%), Repubblica ceca (99%), Svezia (103%) e Lussemburgo (122%).

Nel 2004, quattro operatori erano attivi sul mercato della telefonia mobile, ossia tre che esercitano una rete della seconda generazione e uno che si limita a rivendere servizi di telecomunicazione (Tele2). Facciamo notare che ora Tele2 è attivo anche a Zurigo con una rete di sua proprietà. Il numero di operatori che esercita una rete in Svizzera si situa ai livelli dei Paesi dell'Unione (tra due e cinque). Per quanto concerne il numero di operatori che non esercitano reti ma che propongono servizi di telecomunicazione, la Svizzera fa chiaramente parte del gruppo di Paesi in cui questa alternativa è poco sviluppata. In altri Paesi, invece, questo tipo di fornitori è molto più frequente degli operatori che esercitano una rete. A scopo illustrativo, citiamo che le cifre più elevate si constatano nel Regno Unito, in Svezia e in Lituania con rispettivamente 59, 21 e 21.

Nonostante un numero di operatori in fin dei conti abbastanza simile ai Paesi che ci circondano, la concorrenza sul mercato svizzero della telefonia mobile presenta alcune singolarità nei confronti di quella che regna su altri mercati europei.

In primo luogo, la Svizzera, con la Slovenia e Cipro, è il Paese in cui la filiale dell'operatore storico detiene la quota di mercato maggiore, misurata in percentuale del numero d'utenti. Concretamente, Swisscom Mobile può vantarsi di possedere 61% del mercato, questo valore si situa nettamente al di sopra della media europea (42%). Infatti, se si esamina l'evoluzione della ripartizione delle quote di mercato tra l'operatore storico e i suoi concorrenti a partire dal 1998, si nota che nel 2004 la situazione svizzera corrisponde, più o meno, a quella che prevaleva in media nei Paesi dell'Unione nel 1998. Il fatto che i nuovi venuti abbiano poco peso evidenzia le difficoltà ad impiantarsi su un mercato con lunghezza di ritardo, difficoltà che sono tanto più grandi in un settore dove il tasso di copertura e la qualità dei servizi hanno un ruolo preponderante. Sembra pure provare la fedeltà indefettibile degli utenti svizzeri nei confronti dell'operatore storico. Osserviamo che quest'ultima asserzione pare tra l'altro essere corroborata dal fatto che sussistono differenze di prezzo tra Swisscom Mobile e i suoi concorrenti principali Sunrise e Orange, differenze che diventano sempre più sostanziali più aumenta il livello di consumazione.

In secondo luogo, l'utilizzo della telefonia mobile in Svizzera è molto oneroso nei confronti dell'Europa, indipendentemente dal volume di consumazione considerato. Nei casi esaminati, i valori si situano nettamente al di sopra di quelli medi europei.

La portabilità dei numeri (capitolo 6)

In Svizzera, la portabilità dei numeri è possibile dal 1° marzo 2000. Questo strumento, che mira a intensificare la concorrenza, permette agli utenti di tenere il loro numero di telefono anche se cambiano operatore. Da quando è stata introdotta, la portabilità è stata sfruttata maggiormente sulla rete mobile che non su quella fissa. Nel 2003, 16'693 numeri sono stati portati sulla rete fissa, ossia una crescita del 29% rispetto al 2002. Per quanto riguarda le reti mobili, nel 2003 in Svizzera sono stati portati 118'113 numeri. Nel 2004 si è registrata una sorprendente diminuzione dei numeri portati (-31% rispetto al 2003). Il prezzo che l'operatore storico svizzero riscuote dai suoi concorrenti per portare un numero è relativamente elevato rispetto ai Paesi dell'Ue (20.23 euro per la portabilità fissa e 18.93 euro per la portabilità mobile).

Accesso alla banda larga e prezzi (capitolo 7)

In Svizzera, i collegamenti a banda larga vengono essenzialmente offerti mediante l'ADSL e il modem via cavo. L'importanza quantitativa degli altri mezzi d'accesso (satellite, fibra ottica, PLC, WLL, linee affittate, 3G) può essere considerata una parte trascurabile del mercato globale della banda larga.

Da ottobre 2000, Swisscom offre collegamenti ADSL in diverse larghezze di banda. Sebbene anche altre imprese (28 rivenditori diretti[4] in luglio 2004) forniscano questi servizi, esse dipendono tuttavia dall'offerta wholesale di Swisscom. In effetti, l'accesso completamente disaggregato, l'accesso al collegamento utente e l'accesso a flusso di bit non sono ancora stati concretizzati in Svizzera. Attualmente la rivendita è l'unica possibilità che gli operatori alternativi hanno, esclusa la costruzione di reti d'accesso proprie, per commerciare i loro prodotti. In Europa, la Svizzera è dunque (ancora) un'eccezione in materia.

Come la Danimarca e l'Austria, la Svizzera può essere considerata un piccolo mercato in seno all'Unione europea. Con 1'066'000 collegamenti a banda larga nel mese di luglio 2004 (656'000 ADSL e410'000 modem via cavo), rappresenta circa il 3.6% del volume europeo. A luglio 2004, in Svizzera il tasso di penetrazione dei collegamenti a banda larga si situa fra i più elevati d'Europa, ossia l'14.5% della popolazione. Solo in Danimarca (14.7%) e Paesi Bassi (15.6%) il tasso è più elevato.

Come la maggior parte dei Paesi dell'Unione europea, il mercato svizzero dei collegamenti a banda larga denotava, tra luglio 2002 e luglio 2004, un forte tasso di crescita per tutti i tipi di accesso (+550% per i collegamenti ADSL, +116% per i collegamenti mediante modem via cavo e +266% per tutti i collegamenti a banda larga) mostrando così un dinamismo paragonabile a quello degli albori della telefonia mobile.

Da luglio 2003, continua la tendenza al rialzo poiché, a fine 2004, la Svizzera conta 802'000 clienti ADSL, di cui 490'000 (il 61% delle quote di mercato) all'attivo della filiale dell'operatore storico Bluewin. Nel nostro Paese, ci sono quasi 400 operatori via cavo, di cui una cinquantina sono attivi sul mercato Internet a banda larga. Cablecom è di gran lunga l'operatore più importante. Alla fine del 2004, il numero di collegamenti mediante modem via cavo ammonta a quasi 480'000, di cui 285'000 all'attivo di Cablecom che detiene il 59% del mercato. Infine, osserviamo che il lancio in successione di offerte da parte dei due grandi operatori (Swisscom e Cablecom) conferma la forte concorrenza che regna sul mercato, perlomeno in alcune regioni.

A luglio 2004, i seguenti tre aspetti differenziano la Svizzera dagli altri Paesi europei:

- Rispetto al 2003, la ripartizione è sempre meno equilibrata, in termini di abbonati, tra le tecnologie di collegamento ADSL e modem via cavo (62/38%). Infatti, man mano che il mercato della banda larga si sviluppa, questa proporzione oscilla a favore dell'ADSL, che può avvalersi di una copertura nazionale più completa e beneficiare delle campagne pubblicitarie offensive lanciate dai rivenditori dell'offerta wholesale di Swisscom. La Svizzera si situa ai livelli di Belgio, Regno Unito, Svezia e Paesi Bassi;

- la quota ridotta, nel confronto internazionale, di collegamenti a banda larga in possesso della filiale dell'operatore storico sull'intero mercato (36%). Questa percentuale colloca la Svizzera al 5° posto, tra il Regno Unito (25%), Malta (33%), la Lituania (34%) e l'Austria (35%), della

[4] Osserviamo che i 28 operatori concorrenti hanno a loro volta concluso dei contratti di rivendita con altri fornitori. In Svizzera, si contano circa 60 imprese che propongono servizi ADSL.

graduatoria dei Paesi europei in cui l'operatore storico (o la sua filiale) detiene una parte di mercato relativamente ridotta;

- la ripartizione relativamente equilibrata, nel confronto internazionale, sul mercato ADSL tra la filiale dell'operatore storico e i suoi concorrenti diretti (59 e 41%). Occorre notare che la quota di mercato della filiale dell'operatore storico è aumentata di 3 punti percentuali tra luglio 2003 e luglio 2004, passando dal 56% al 59%.

Prezzi della telefonia fissa (capitolo 8)

In materia di prezzi per la telefonia fissa, nel 2004 il nostro Paese presenta una situazione molto contrastata a seconda dei segmenti di mercato esaminati.

Per quanto concerne la tariffa di base per un collegamento analogico, citiamo che la Svizzera si situa al di sopra della media europea ponderata (14.36 Euro), con un prezzo mensile, IVA inclusa, di 16.48 Euro. Se la Svizzera è stata per lungo tempo uno dei Paesi nettamente più cari d'Europa, si noterà che il divario si sta a poco a poco colmando. In effetti, dalla liberalizzazione in poi, nella maggior parte dei Paesi dell'Unione si procede a un aumento dei prezzi del collegamento affinché riflettano meglio i costi effettivi. Da gennaio 1995, il prezzo del collegamento analogico non ha subito variazioni in Svizzera, eccezion fatta per la ripercussione degli aumenti successivi dell'IVA.

La Svizzera occupa, nel confronto internazionale, una posizione poco favorevole pure dal punto di vista del prezzo delle comunicazioni locali. Questa situazione si spiega essenzialmente attraverso l'entrata in vigore, nella primavera del 2002, di una tariffa nazionale unica indipendente dalla distanza.

Tuttavia, la situazione si presenta in modo completamente diverso per quanto riguarda il segmento del mercato delle comunicazioni nazionali, poiché la Svizzera si situa nel terzo dei Paesi con i prezzi meno elevati. Più precisamente, per un utente svizzero il costo di una comunicazione nazionale di tre o dieci minuti è chiaramente al di sotto della media europea ponderata.

Infine, per quanto concerne il prezzo delle comunicazioni internazionali, il nostro Paese occupa una posizione particolare, poiché quasi nessun altro ha prezzi altrettanto attraenti, ossia nettamente al di sotto della media europea.

Sette anni dopo la liberalizzazione, la concorrenza a livello di prezzi sembra continuare ad avere un ruolo importante, poiché non si può (ancora) osservare un fenomeno di livellamento. Dunque, comparando l'operatore storico al suo principale concorrente, si constata che il costo dei diversi tipi di comunicazione, variabile in funzione della durata e della destinazione, è generalmente inferiore del 10 - 20% presso Sunrise. Naturalmente, nei singoli casi ci sono alternative ancora più convenienti sul mercato.

Tariffe delle linee affittate al dettaglio (capitolo 9)

Nel settore del mercato al dettaglio delle linee affittate, Swisscom è tuttora l'unico operatore ad offrire una copertura nazionale e a proporre linee affittate a prezzi differenziati a seconda di destinazione, distanza e larghezza di banda. La sua vasta copertura a livello nazionale, le permette di disporre di un ampio margine di manovra in quanto ai prezzi fatturati ai clienti finali. In altri termini, Swisscom può facilmente ridurre i prezzi delle sue offerte per renderle più competitive di quelle della concorrenza.

Purtroppo non disponiamo di informazioni relative alle tariffe del 2004. Infatti, Swisscom non trasmette più alla fondazione Teligen informazioni su questo segmento di mercato.

Tuttavia, se ci si riferisce agli anni precedenti il 2004, e si si considerano le tariffe praticate da Swisscom, a partire dalle informazioni trasmesse dall'operatore alla fondazione Teligen per i paragoni internazionali, si constata che nella maggior parte dei casi le tariffe delle linee affittate, all'interno delle città o tra di esse, per le portate di 64kbit/s e 2Mbit/s, si situano al di sotto della media dell'Unione europea. Variano infatti tra il 12% al di sotto della media per le linee affittate di 64kbit/s di 200 km e il 41% per le linee affittate di 64kbit/s di 2 km.

Osservando l'evoluzione delle tariffe dal 1998 per le due bande passanti e le due distanze considerate, notiamo che si è registrato un importante calo tra agosto 1999 e agosto 2000. Tra il 1998 e il 2003, i prezzi si sono abbassati per le distanze di 2 km e 200 km, risp. del 30 e 43% per la banda dei 64kbit/s e risp. del 43 e 91% per la banda dei 2Mbit/s. La Svizzera ha registrato tassi di decrescita maggiori rispetto ai tassi medi europei, in particolare all'interno delle grandi città (distanza di 2 km). Tuttavia, per poter valutare la situazione in modo più circostanziato, occorrerebbe esaminare il livello dei prezzi in vigore nel 1998.

ANNEX 1

MARKET OVERVIEW

SOURCES OF DATA PRESENTED IN THIS ANNEX

The data presented in the section on the value of the communications market come from the European Information Technology Observatory (EITO) 2004. National regulatory Authorities (NRAs) and the European Commission have agreed to use these data as a proxy for the overall market value and its breakdown by segments. These data were prepared by IDC and the EITO Task Force on the basis of the information available as of December 2003.

Figures in sections 2 (players in the fixed market), 3 (consumers' choice of fixed operators), 4 (public network interconnection charges), 5 (mobile operators), 6 (number portability) and 7 (broadband access pricing) were provided by the National Regulatory Authorities (NRAs) in response to a questionnaire on regulatory market data sent by the Commission in June 2004.

Data on mobile subscribers (section 5) refer to the end of June 2004 and come from the NRAs and, where NRAs do not have figures for the end of June, from the European Mobile Communications Report..

Data in section 7 on the number of broadband lines are provided by the NRAs and the national ministries through the Electronic Communications Committee (COCOM). Data have been collected since July 2002 three times a year, in January, June and October. The figures in this report refer to 1 July 2004.

Information in sections 8 & 9 (PSTN and retail leased lines pricing comparisons) is taken from a study carried out for the Commission by Teligen-HI Europe. These data are collected from primary sources (i.e. directly from the incumbent operators and new entrants) and checked by the NRAs. All NRAs, with the exception of Cyprus, Spain and Luxembourg, provided comments and endorsed these data.

This annex includes information from the 10 New Member States that joined the European Union in May 2004 (Estonia, Latvia, Lithuania, Poland, Czech Republic, Slovakia, Hungary, Slovenia, Malta and Cyprus). In some cases information on indicators is unavailable, with the result that some Member States are not included in some of the charts. Footnotes below these charts indicate when this situation occurs.

A draft version of the charts in this annex was distributed to the NRAs before this report was finalised and a validation meeting with representatives from NRAs and National Ministries took place on October 11.

TABLE OF CONTENTS

1 ESTIMATED SIZE AND GROWTH OF THE EU TELECOMMUNICATIONS MARKET

This section provides estimates of the value of the EU telecommunications market and its breakdown into main segments (voice telephony, mobile services, switched data and leased line services).

All the data presented here are expressed in end-user spending. Data for all years of the historical and the forecasted period are expressed in nominal terms.

Figures for 2004 are forecasts by the European Information Technology Observatory (EITO). Actual values, calculated *ex post*, might differ from those provided here.

EITO provides a combined estimate for Belgium and Luxembourg. The figures given in the following charts are estimates based on the relative numbers of fixed lines and mobile subscribers in each of the two countries. The data for Cyprus and Malta have been estimated by the Commission.

The charts below show the value of the telecommunications market, which encompasses the following segments as defined by EITO:

- Fixed voice telephony services: This segment includes carrier service revenues for residential, business, national and international voice services. It includes services used primarily to transport or enhance voice communication via the circuit switched telephone network (fax machine traffic is included in fixed voice services. It includes local and long distance calling, fixed-to-mobile; fixed charges (line rentals and connection fees), and revenue from enhanced services, such as call forwarding and caller identification. Internet and online services are not included in this segment. They are counted in fixed data services.
- Fixed data services: Services that can be used to transport data via fixed lines. Increasingly, data technologies allow for voice and data to travel via the same network and/or technologies. For example, IP technology is increasingly used to transport voice. In such cases, the voice portion is not separated from the data communications revenue – both are included in the data revenue. Fixed data services include packet/cell services, Internet access (including dial-up), broadband (including broadband revenues over cable modem), VoIP, and IP VPN.
- Mobile telephone services: This segment includes cellular/personal communications services (PCS), Specialized Mobile Radio (SMR), mobile data networks, and mobile satellite services. It includes voice and data and enhanced services, such as location-based services. Mobile data services include SMS and mobile Internet data services.
- CaTV services: Includes revenues from basic CaTV subscriber service providing transmission improvement and/or added broadcast channels, plus revenues from auxiliary CaTV services (such as pay-TV, security services, or shopping) when provided via a separate CaTV network. This includes revenues from any operator, public or private.

Figure 1 and Figure 1a display the estimated value of the telecommunications market in the EU25 and in Switzerland, as depicted above, and the trend since 2000. The inter-annual growth rate is shown in Figure 2.

The Swiss telecommunications market has been expanding continuously. The yearly growth rates in Switzerland are lower than the ones of the EU 25 since 2001. Moreover, the growth rates of the Swiss telecommunications market have been decreasing each year since 2001.

Figure 1

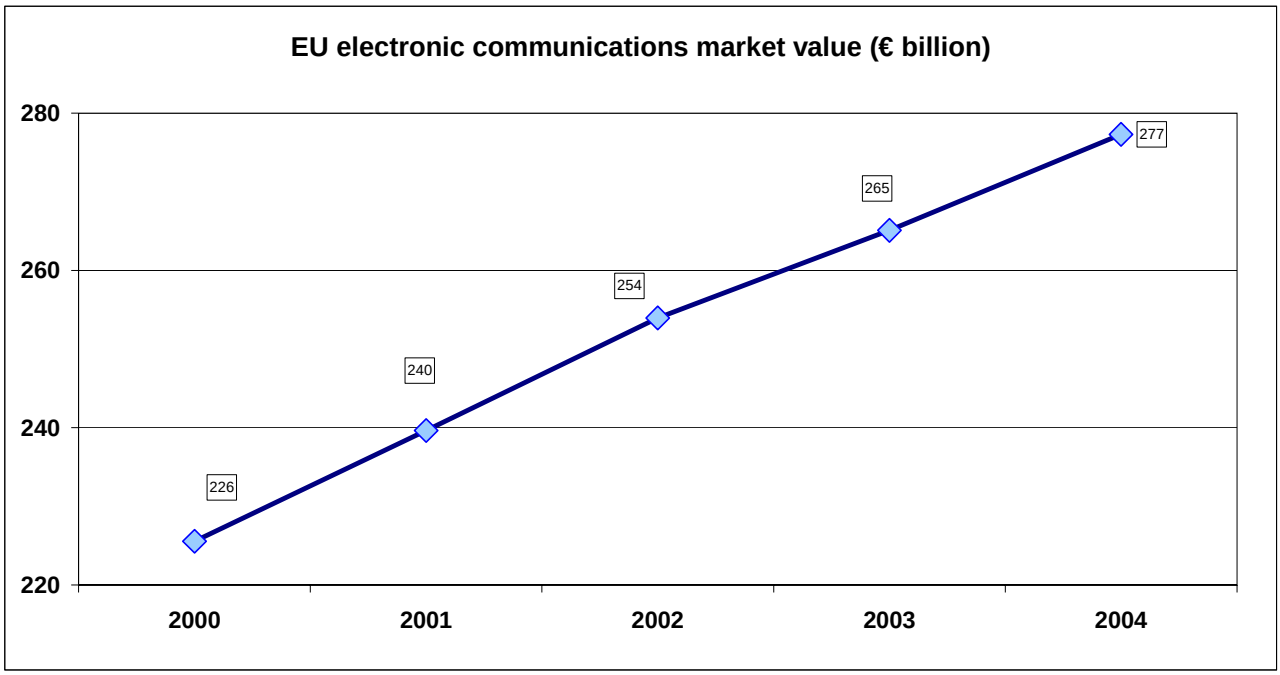
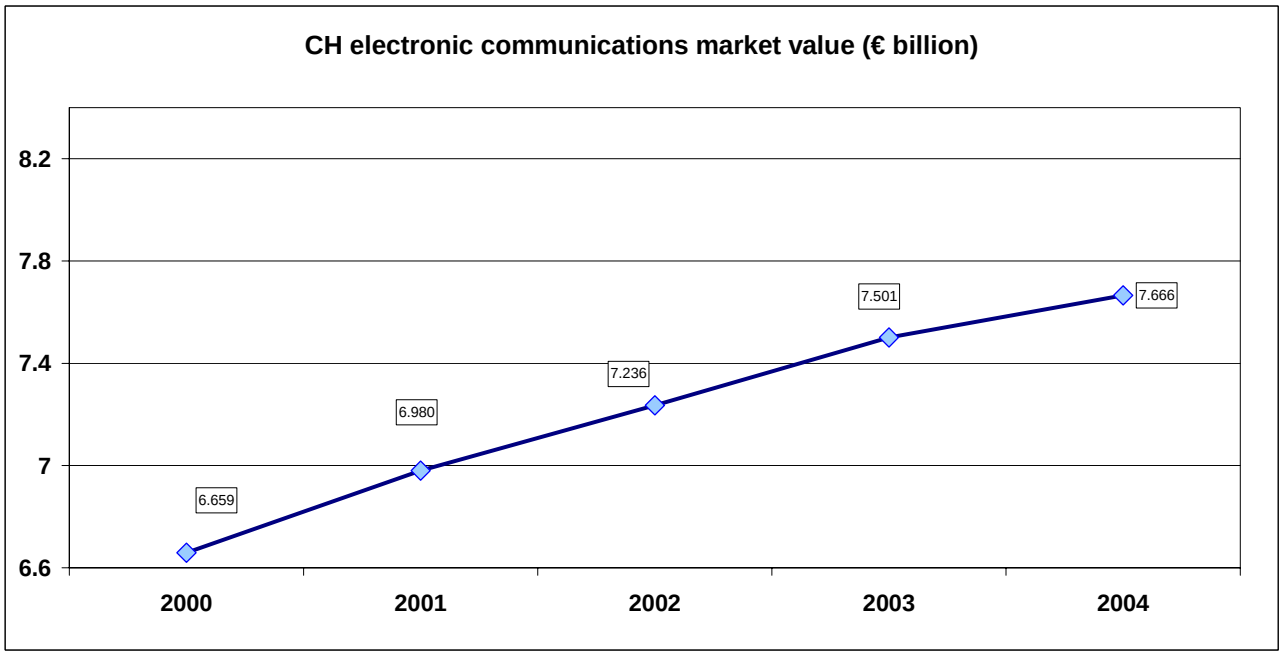
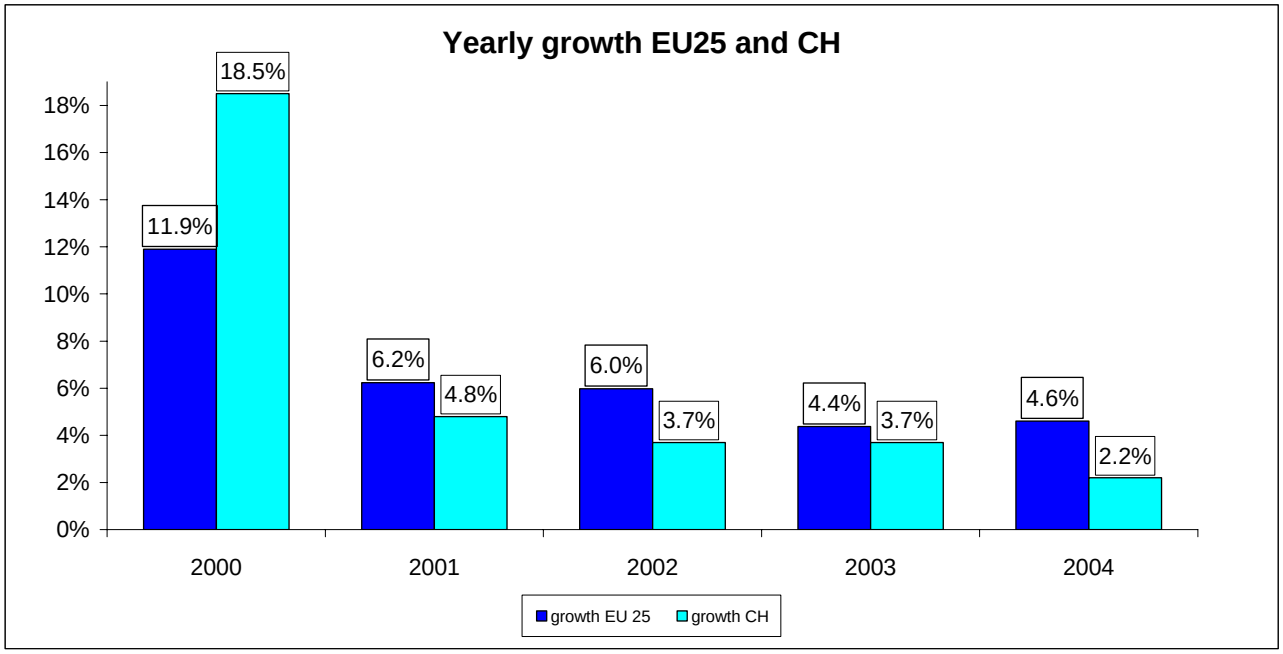


Figure 1a



Source for Switzerland: EITO 2003 (year 2000) and EITO 2004 (year 2001-2004).

Figure 2



Source for Switzerland: EITO 2002 (year 2000), EITO 2003 (year 2001) and EITO 2004 (year 2002-2004).

Figure 3 shows the relative value of the communications market in the New Member States compared to the overall EU25 market value. The overall EU25 market value is estimated to be € 277 billion, with the value of the EU15 estimated at € 256.8 billion and the New Member States € 20.2 billion.

Figure 3

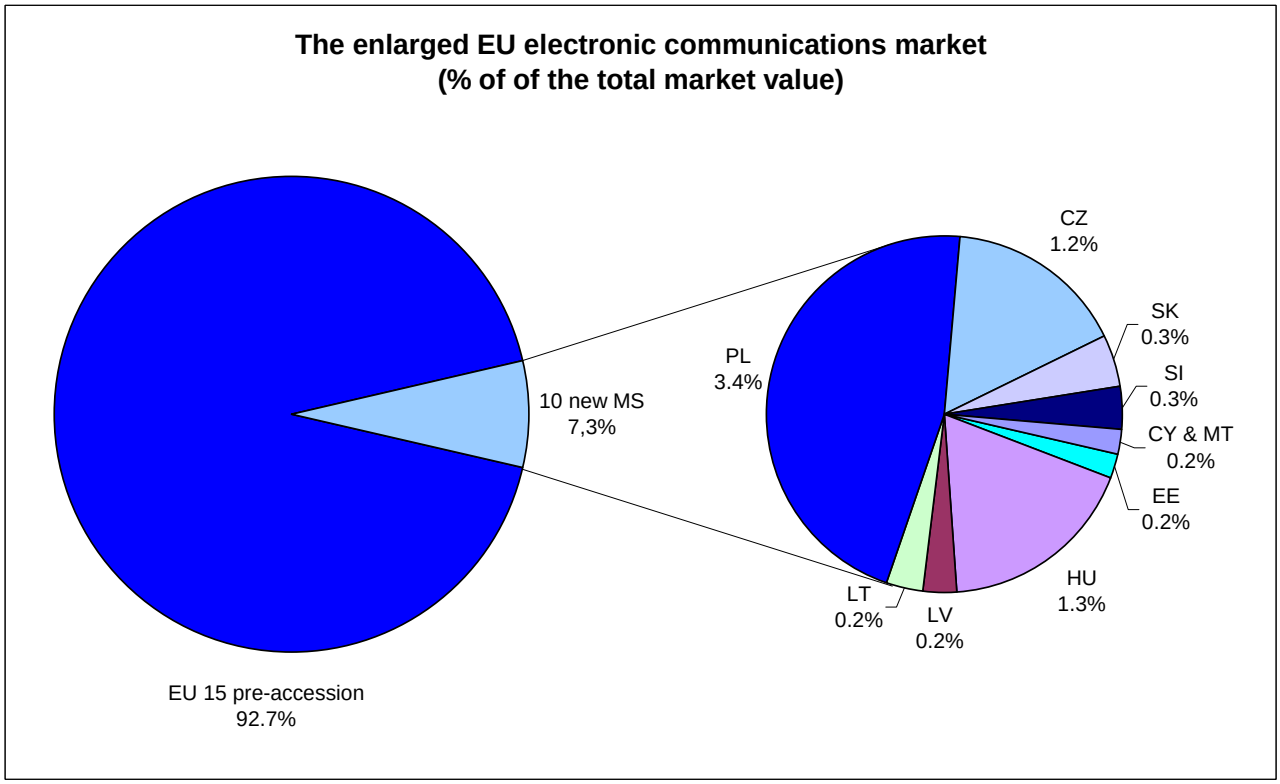
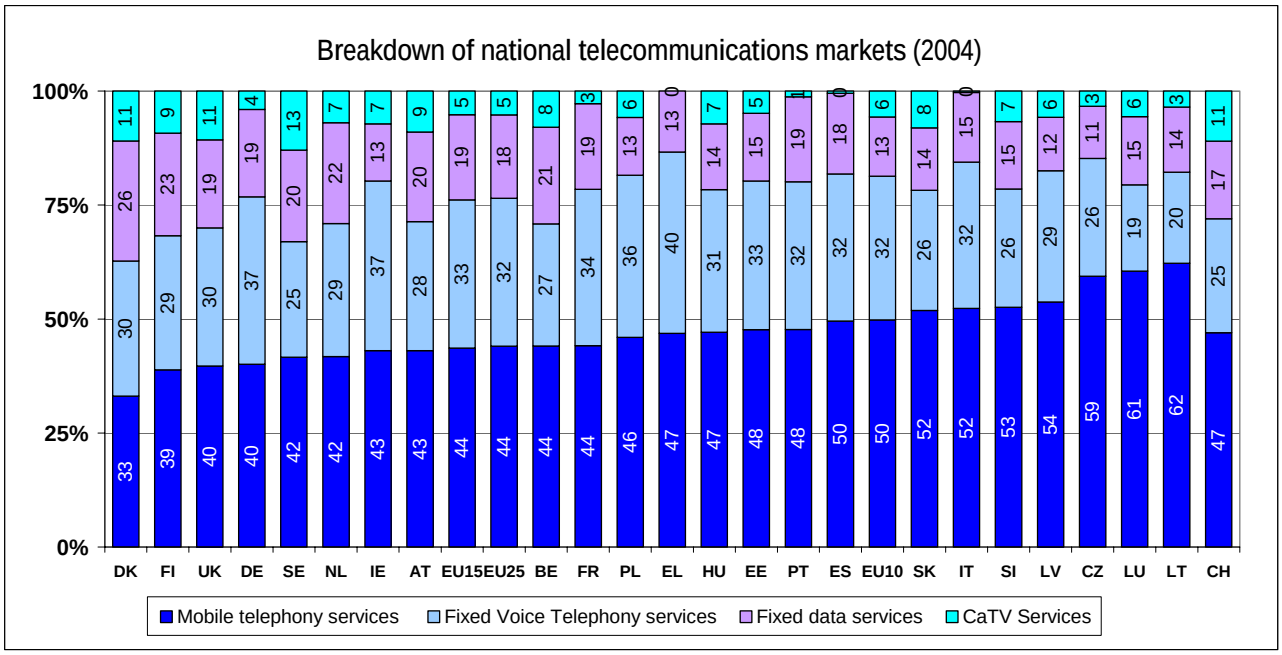


Figure 4 displays the relative value of each of the four market segments (mobile telephony services, fixed voice telephony services and CaTV services) with respect to the total national market. According to these estimates, mobile revenues are the largest contributor to the overall communications market in all Member States and represent more than 50 % of the overall national market in Lithuania, Luxembourg, Czech Republic, Latvia, Slovenia, Italy and Slovakia. Mobile revenues also represent 50% of the average market value of the New Member States. Fixed and mobile telephony services represent 72% of the Swiss telecommunications market, compared to 77% of the EU15 average and to 82% of the new Member States' market.

Figure 4



Source for Switzerland: EITO 2004.

The following charts show how the mobile and the fixed data services sectors have become the main drivers of growth in the communications market, while fixed-voice revenues steadily lose ground in Member States.

In Switzerland the mobile market makes the greatest contribution to the growth of the total communications market. The growth rates are, however, lower than the European average. Other sectors of the Swiss market remain relatively stable.

Figure 5

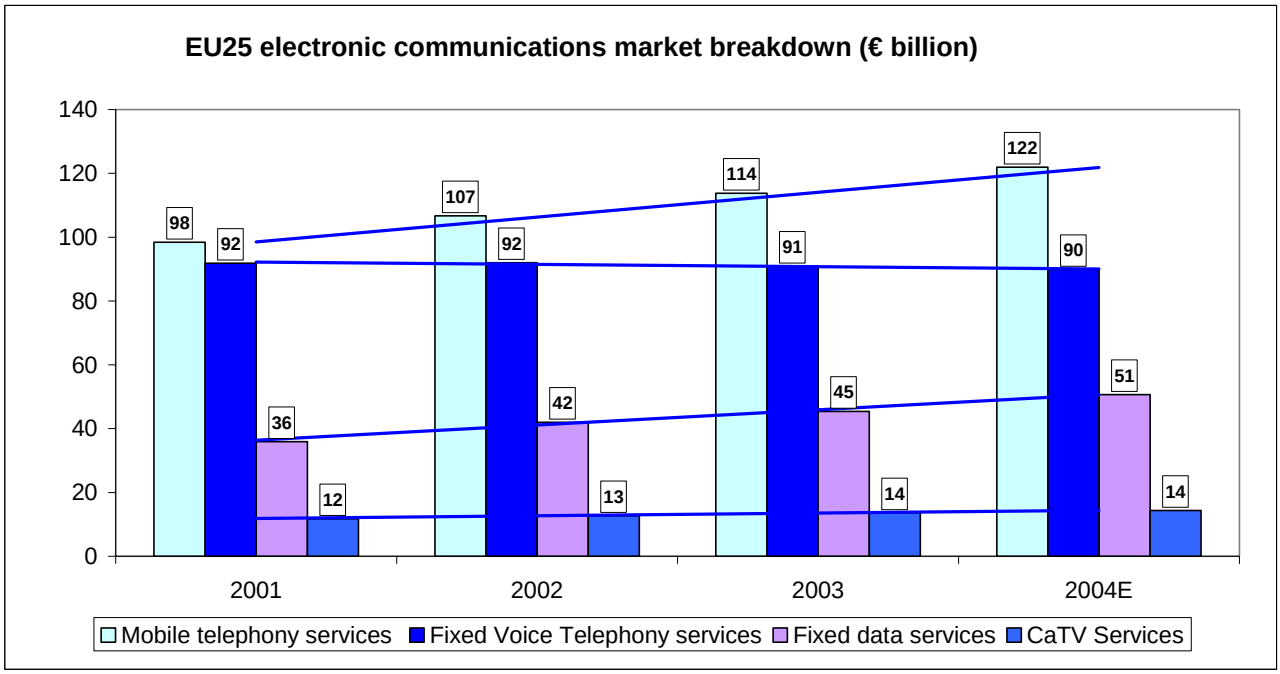
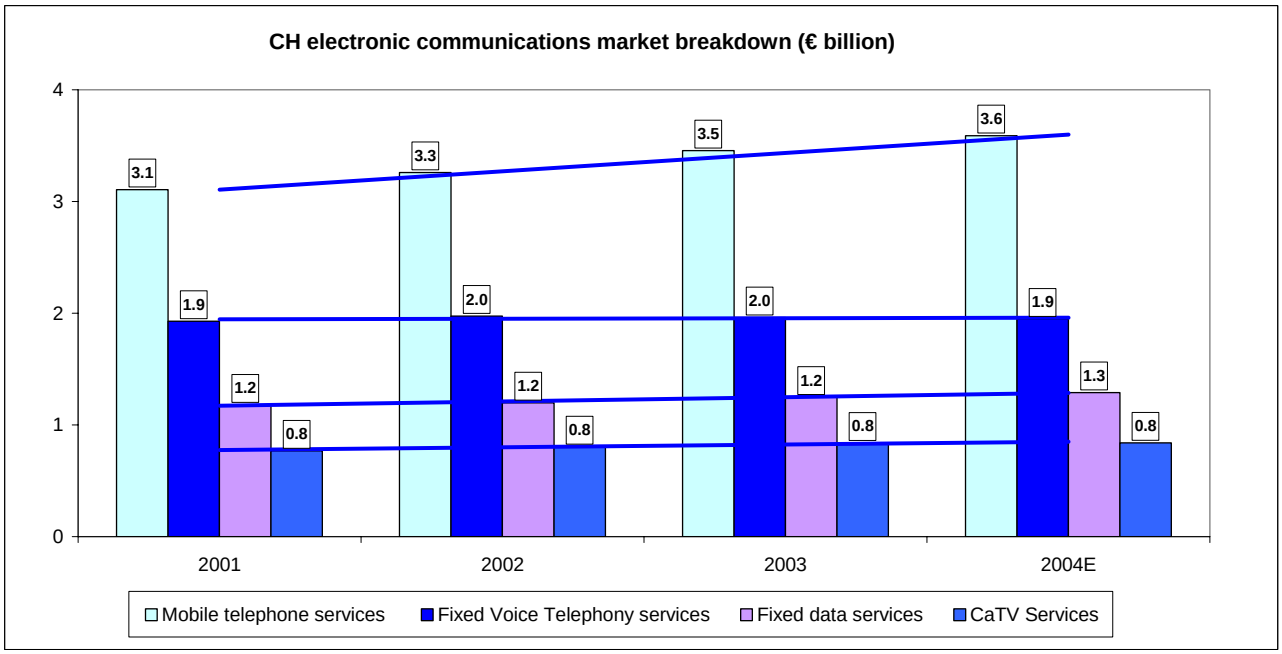
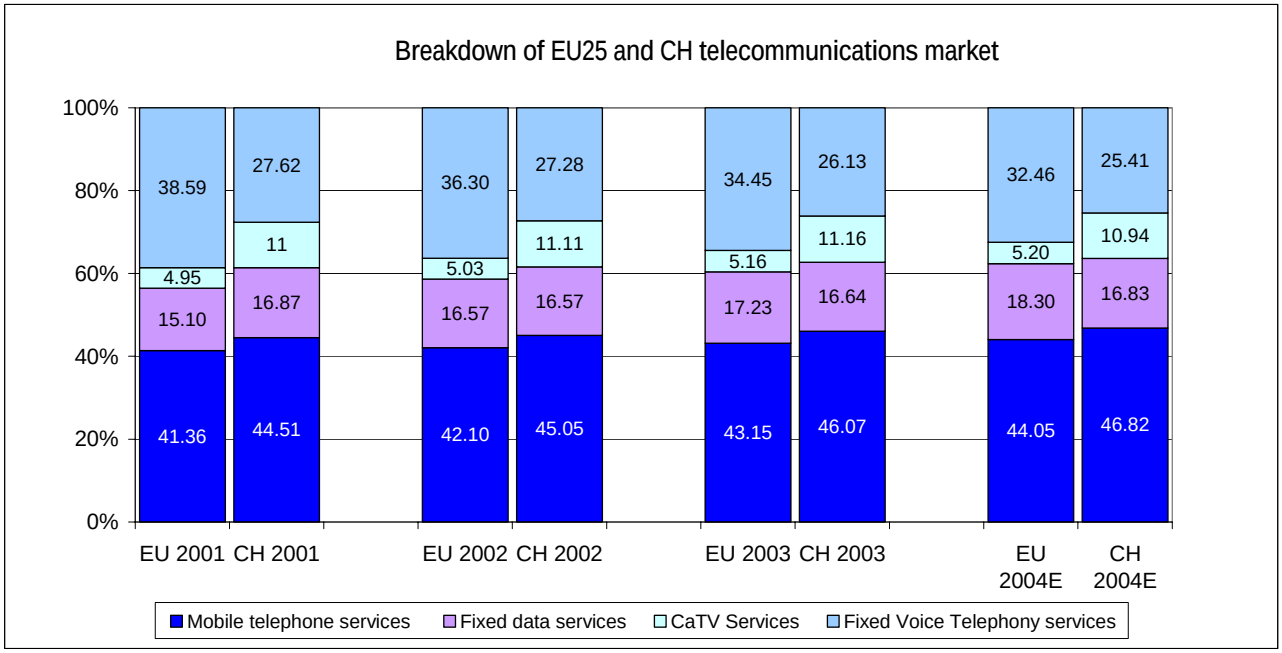


Figure 5a



Source for Switzerland: EITO 2004.

Figure 6



Source for Switzerland: EITO 2004.

2 PLAYERS IN THE FIXED MARKET

2.1. PLAYERS IN THE FIXED MARKET

This section looks at the number of fixed telecommunications operators (fixed voice telephony and network services) in the market. It includes data on the estimated number of operators authorised to operate a network and to provide public fixed voice telephony, the number of players actually active in the market and the incumbents' market shares in the fixed voice telephony market.

Data are provided by the national regulatory authorities and refer to July 2004, also for Switzerland. The figures include a variety of operators: fixed network operators, service providers, cable operators as well as wireless local loop, and mobile and satellite operators for the fixed part of their networks and services.

Under the new regulatory framework for electronic communications, operators are only subject to a general authorisation regime. Undertakings may be required to submit a notification but may not be required to obtain an explicit decision or any other administrative act. Granting of individual rights of use is required only for scarce resources such as radio spectrum or numbers.

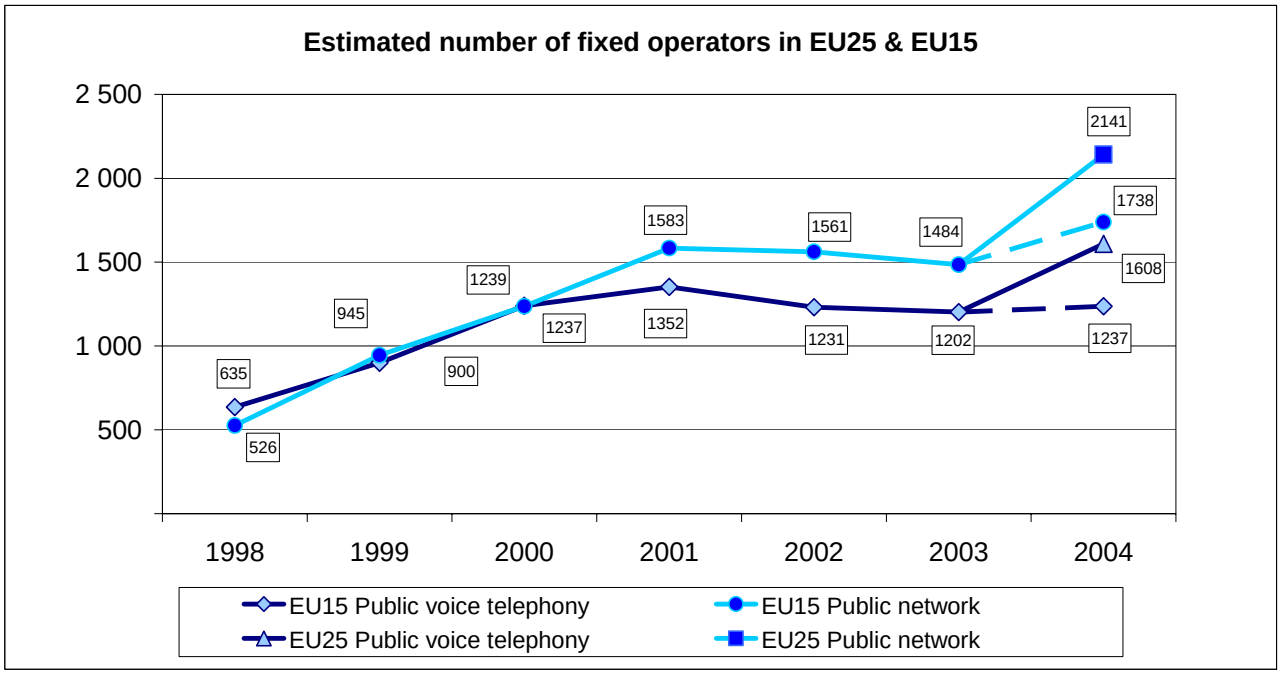
Given the above, the quality of the information provided by the NRAs on the number of operators is variable, and while a number of NRAs are able to provide very detailed information on the number and characteristics of their national operators, other NRAs no longer have precise information. Therefore, the overall figures on the number of operators should be considered as estimates.

There are two major developments in 2004 with respect to previous years. The enlargement of the EU gave rise to a significant increase in the number of operators. This increase (23% in the number of network operators and 28% in the number of voice operators) is considerably higher than the increase in the value of the market as described in the previous section (Figure 3). The second development is the rise in the number of operators at EU15 level (17% in network operators and 3% in voice operators), which means a halt in the downward trend observed since 2001. Although modest in the case of voice providers, this change is in line with the renewed climate of confidence signalled in the Commission Communication.

Among the voice telephony operators in the EU, around half (some 830) actually provide services. In the new Member States (NMS), where the liberalisation process started later than in the EU15, similar patterns can be observed in that new entrants provide services to specific market segments. Again competition in these countries is at an early stage and largely concentrated in the international calls market.

The total number of major competing operators (i.e. operators that along with the incumbent operator have a combined market share of at least 90% of the global telephony market;) in the EU is around 82. Only in 5 Member States there are more than 5 major competing operators (Figure 12).

Figure 7



2.2. PUBLIC FIXED NETWORK OPERATORS

The chart below shows the estimated number of network operators authorised to offer network services. *Public network operators* are defined as operators that install, manage and operate a telecommunications transmission network to provide public telephony services or public network services in the whole national territory, whatever the geographical scope of the service.

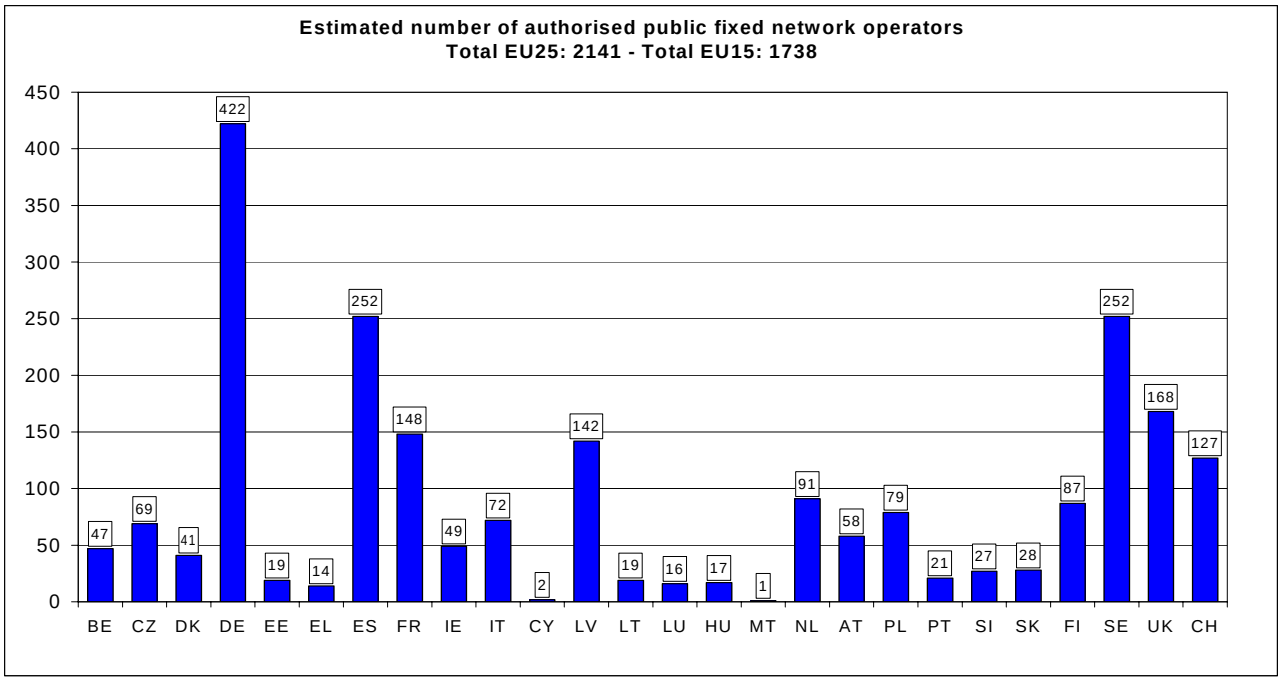
As at July 2004 there were a total of 2141 authorised network operators in the EU.

In Switzerland in 2004, there were 127 telecommunication services providers holding a licence[5] and therefore authorised to operate a public network. Compared with 2003[6], this figure has increased fairly significantly, by 10.4%. In addition to this, and taking into account its small size, Switzerland has a relatively high value, which puts it in seventh position in the European table.

[5] We have implicitly assumed that the category "operators authorised to operate a public network and to provide public telephone services" corresponded, in Switzerland's case, to licensed operators. Operators subject to the licensing regime are those independently operating an extensive part of the telecommunications installations (art. 4, para. 1 of the Law on Telecommunications).

[6] Source: OFCOM Switzerland, The Swiss telecommunications market – an international comparison, Extract from the 9th European Union implementation report extended to include Switzerland, Bienne, July 2004, p. 15.

Figure 8



Denmark: Due to the fact that in Denmark there is neither a licensing requirement nor a central register of operators, the number of operators authorised to offer public voice telephony has been estimated using the number of allocated access codes. All providers offer nationwide services. Simple resellers are excluded.
Germany: Figures refer only to the operators that received a licence before mid 2003.
Spain: Several operators have been grouped under the AUNA (7) and R brands (2)
Finland: 40 network operators are local incumbents and belong to the Finnet Group. 5 network operators belong to the Elisa Group.
France: Of the 148 operators declared, 109 are in a test phase (especially for WIFI)

Source for Switzerland: OFCOM Switzerland.

2.3. PUBLIC FIXED VOICE TELEPHONY OPERATORS

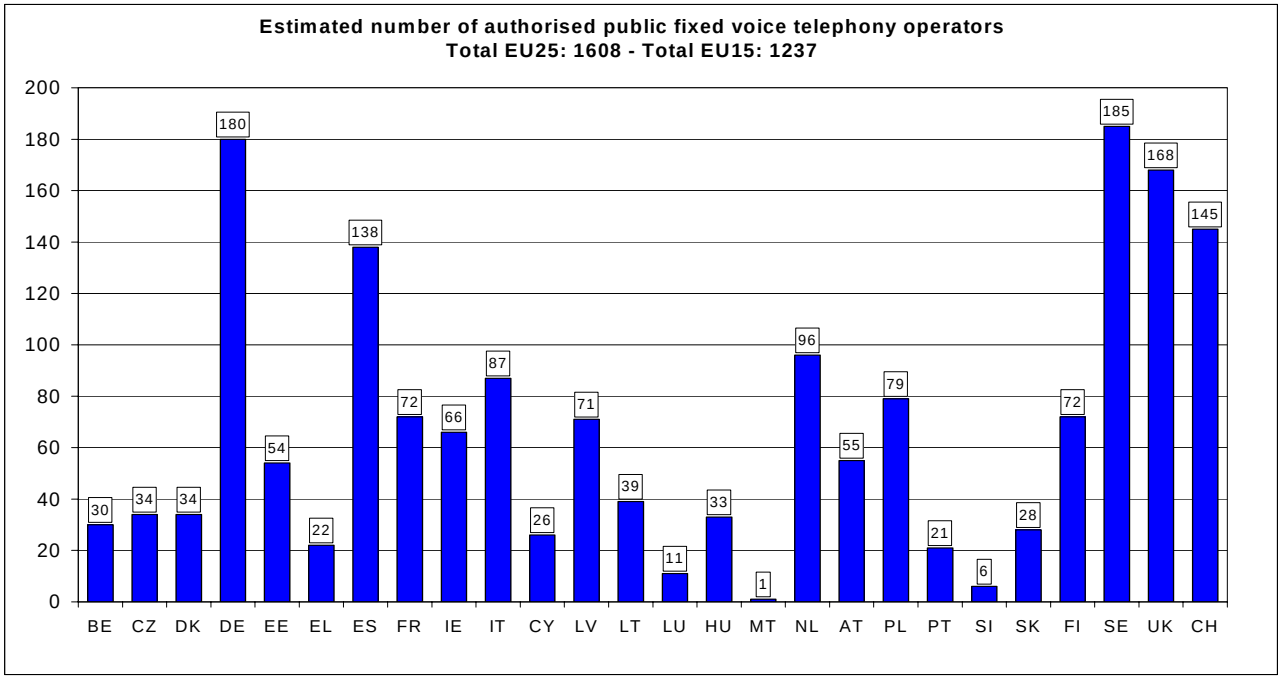
Public fixed voice telephony is defined as a service available to the public for the direct transport on a commercial basis of real-time speech via the public switched network, such that any user can use equipment connected to a network termination point at a fixed location to communicate with another user of equipment connected to another termination point. Voice telephony could be provided by operators on an own self-operated network or on a leased network. In the first case, the operator provides voice telephony over a network fully controlled, operated and (wholly or partially) owned by it; in the second case the operator operates, controls and manages the transmission capacity leased from another operator. Simple call-back and calling card services as well as operators dealing only with marketing, billing, etc., are excluded. The definition of service provider may differ from that used in the national law of individual countries (in some countries non-self operated network operators engage exclusively in reselling activities).

Theoretically, a total of 145 operators[7] are able to offer voice telephony services in the Swiss market (Figure 9). In the European comparison, this puts Switzerland among countries which have the highest number of providers. Compared with the previous year, with 110 operators[8], the recorded increase is fairly spectacular (+ 31.8%).

[7] In the fixed telephony sector, Switzerland has 35 licence-holding operators and 110 operators subject to the obligatory notification procedure. Operators subject to the licensing regime are those who independently operate an extensive part of the telecommunications installations used for transmission.

[8] Source: OFCOM Switzerland, The Swiss telecommunications market – an international comparison, Extract from the 9th European Union implementation report extended to include Switzerland, Bienne, July 2004, p. 16.

Figure 9



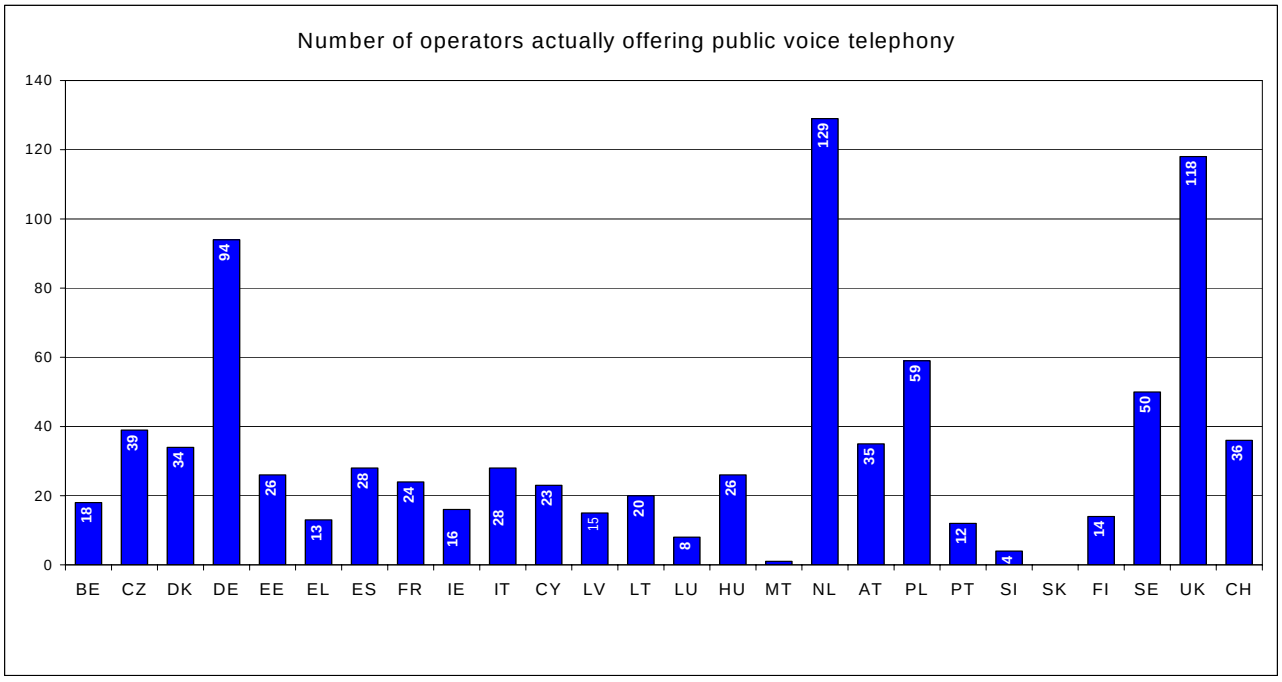
Denmark: Due to the fact that in Denmark there is neither a licensing requirement nor a central register of operators, the number of operators authorised to offer public voice telephony has been estimated using the number of allocated access codes. All providers offer nationwide services. Simple resellers are excluded.
Germany: Figures refer only to the operators that received a licence before mid 2003.
Spain: Several operators have been grouped under the AUNA (7) and R brands (2)
Finland: 39 operators are local incumbents and belong to the Finnet Group. 5 national operators belong to the Elisa Group.

Source for Switzerland: OFCOM Switzerland.

The number of operators authorized to offer public fixed telecoms services indicates only the potential for competition in the market rather than the actual level of competition. For this reason, where possible, an estimate is given of the number of operators that are active in the market. The following chart shows the estimate of the number of operators active in the voice telephony market at July 2004. Figures do not distinguish between local and national operators.

In comparison with the preceeding Figure (Figure 10), Switzerland, with 36 active providers, is one of the leading countries. From this one can conclude that approximately only every fourth licensed operator actively offers voice telephony services.

Figure 10

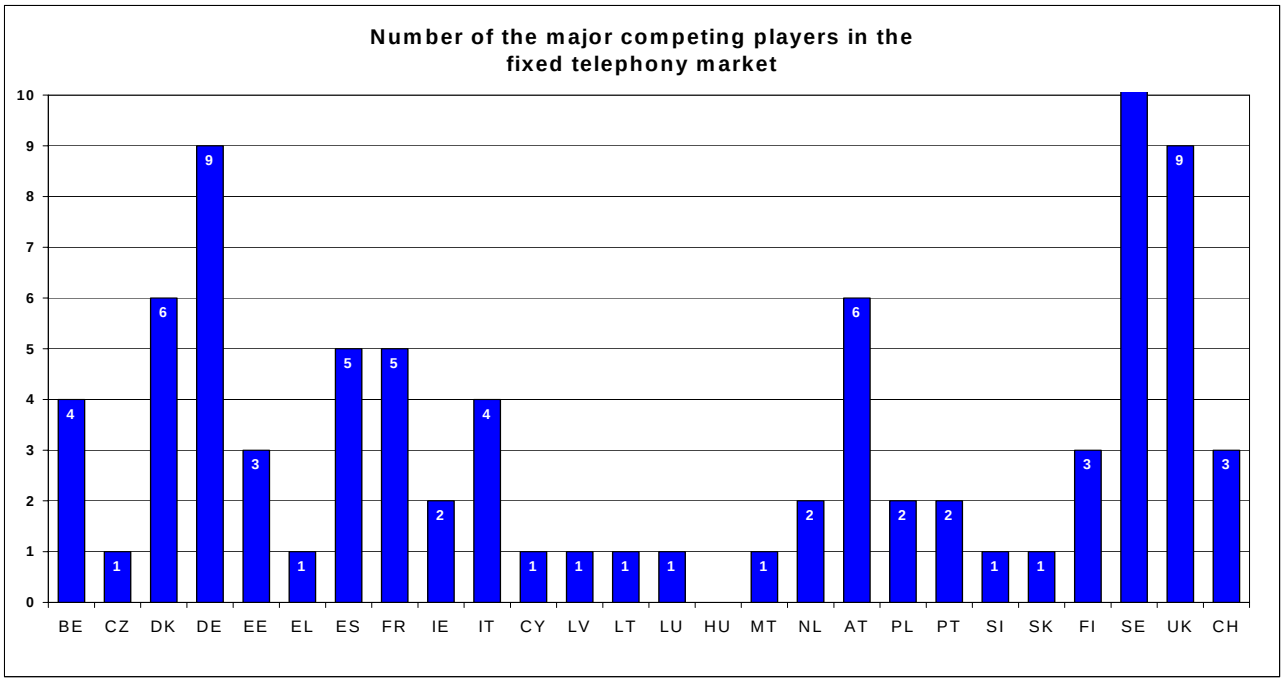


The chart includes cable TV operators that also provide voice telephone services
Denmark: Minimum figure based on the number of operators known to the NRA.
Spain: Several operators have been grouped under the AUNA (7) and R brands (2)
France: Only those operators that have responded to the ART statistical questionnaire. There are 23 operators providing local calls service (4 local operators and 19 national operators) and 28 operators providing long-distance calls (4 local and 24 national operators)
Austria: Only operators that gave information on operating revenues for local/national/ international call services
Poland: data for voice operators refer to 2003
Sweden: 50 approx. for voice.

Source for Switzerland: OFCOM Switzerland.
Note: situation at the end of 2003

Many new entrants concentrate on specific segments of the market or limit their activity to specific geographic areas, thus having a limited impact on the national market as a whole. To get an idea of the number of fixed operators that are effectively competing with the incumbent at national level, the following charts (Figure 11 and 12) show, for each country, the number of operators that have a combined market share, based on revenues, of at least 90% on the total voice telephony market including all types of calls (Local calls to internet, local phone calls, long-distance and international calls as well as calls to mobile). Only 5 countries have more than 5 competing operators (including the incumbent) with such a combined market share. These figures give an idea of the number of major players operating in each national market, although in many cases, competition is largely asymmetric, with incumbents continuing to hold a strong position. This situation can be observed in the New Member States, where the fixed incumbent still dominates the fixed voice market. In the Swiss fixed network voice telephony market, three providers share more than 90% of the market. This places Switzerland at approximately the European average, but clearly behind Sweden, Great Britain and Germany each with at least nine operators.

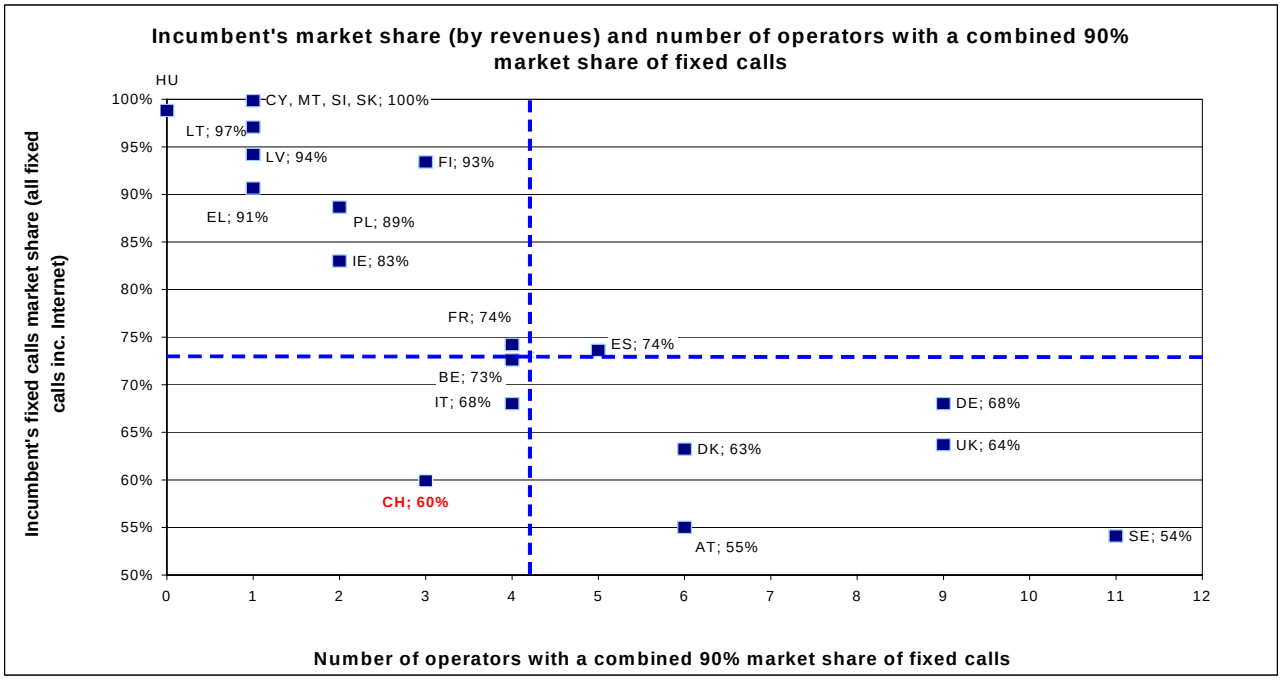
Figure 11



In Hungary there are 5 fixed incumbent operators, each of them former local monopolies in their primary areas. The level of competition in these 5 fixed traffic markets is not significant yet.

Source for Switzerland: OFCOM Switzerland.
Note: the overall market share of the fixed calls does not include Internet calls.

Figure 12



Data for the Netherlands, Luxembourg and Portugal not available.
Data on market shares for Estonia and Czech Republic are confidential.
Belgium: No distinction between local and national calls
Denmark: Market share based on minutes, not on traffic
Slovakia: Only the incumbent operator is actually providing services.
Finland: The 3 incumbent groupings hold 93.4% of voice market
Sweden: Figure includes VoIP players
Hungary: There are 5 fixed incumbent operators, each of them former local monopolies in their primary areas. The level of competition in these 5 fixed traffic markets is not significant yet.

Source for Switzerland: OFCOM Switzerland.
Note: the overall market share of the fixed calls does not include Internet calls.

2.4. INCUMBENTS' MARKET SHARE IN THE FIXED VOICE TELEPHONY MARKET

This section shows the incumbents' market share in the fixed voice telephony markets on the basis of both retail revenues and outgoing minutes of traffic. Where possible, figures for local, long-distance, international call, calls to mobile and calls to internet are shown. It has to be noted that, in Switzerland, local and long-distance call data are no longer separated in 2003 due to the introduction of the closed numbering plan in March 2002. Since that date, the historic operator has been applying a new charging system which offers only one tariff, regardless of distance. We therefore decided to display in 2003 an aggregated indicator which combined local and long-distance calls.

Not all Member States collect both types of data, and differentiation between the various markets is not always available.

Figures in this section have been provided by NRAs, also for Switzerland, and refer to December 2003, except for United Kingdom (March 2004) and Austria (September 2003).

In Cyprus the situation has changed very rapidly since December 2003 and in September 2004 the incumbent operator had lost 4% in the local/national market and 3% in the market for international calls.

The following chart shows the EU15 weighted average trend for the incumbent's market share in the major segments of the voice telephony market since 2001 based on retail revenues. Data are not comparable with data of previous reports, due to the fact that figures for the years 2000, 2001 and 2002 have been updated to reflect revised data received from several Member States and the EU average is weighted on the national population, while in previous reports a simple average was shown.

Given that data was not available for all countries and for all types of calls, the average EU data should be considered as indicative. The figure for the local calls market is an average of countries that represent more than 90% of the EU population in 2001, 2002 and 2003; data for calls to mobile represent around 94% of the EU population for the period 2003-2001 and 90% for the year 2000; data for international calls represent more than 96% of the EU population for all the periods considered.

Figure 13

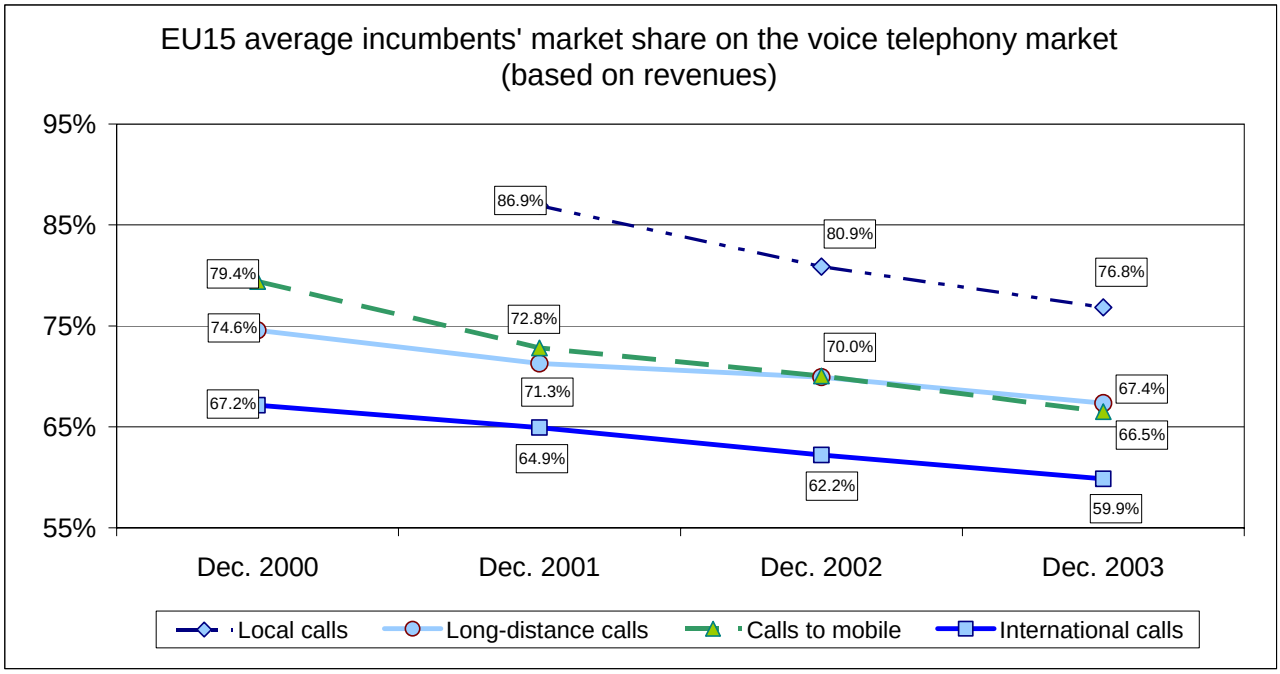
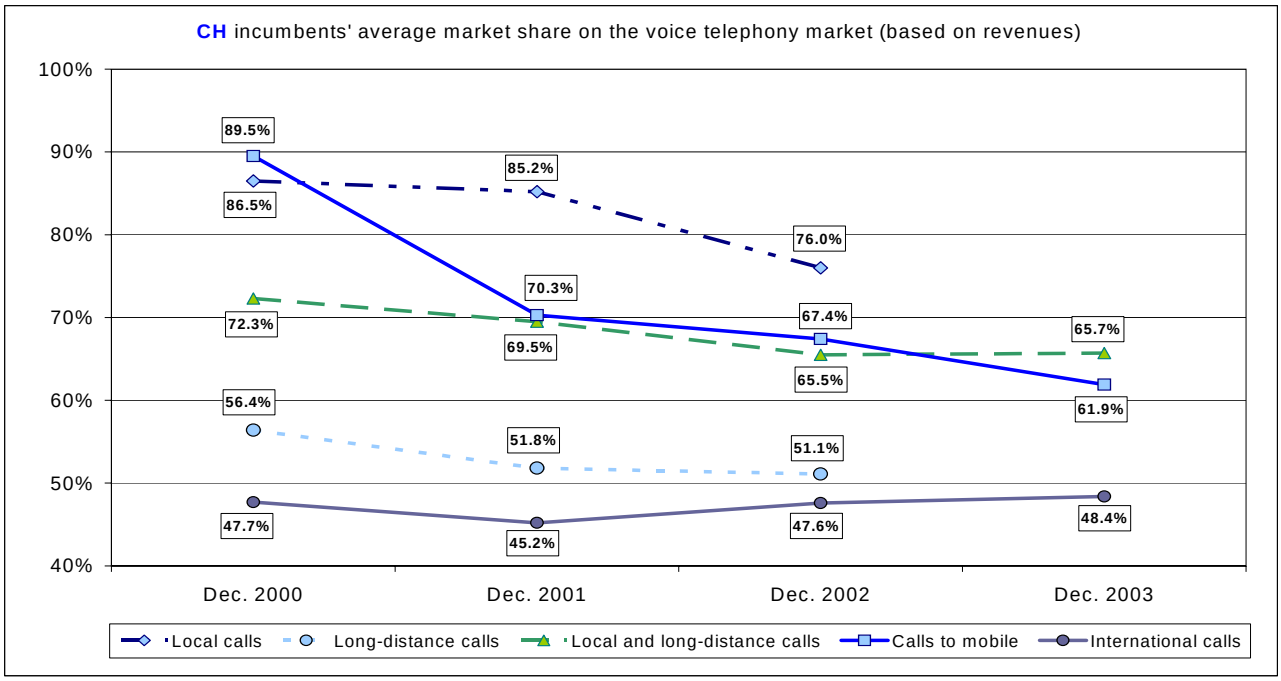


Figure 13a



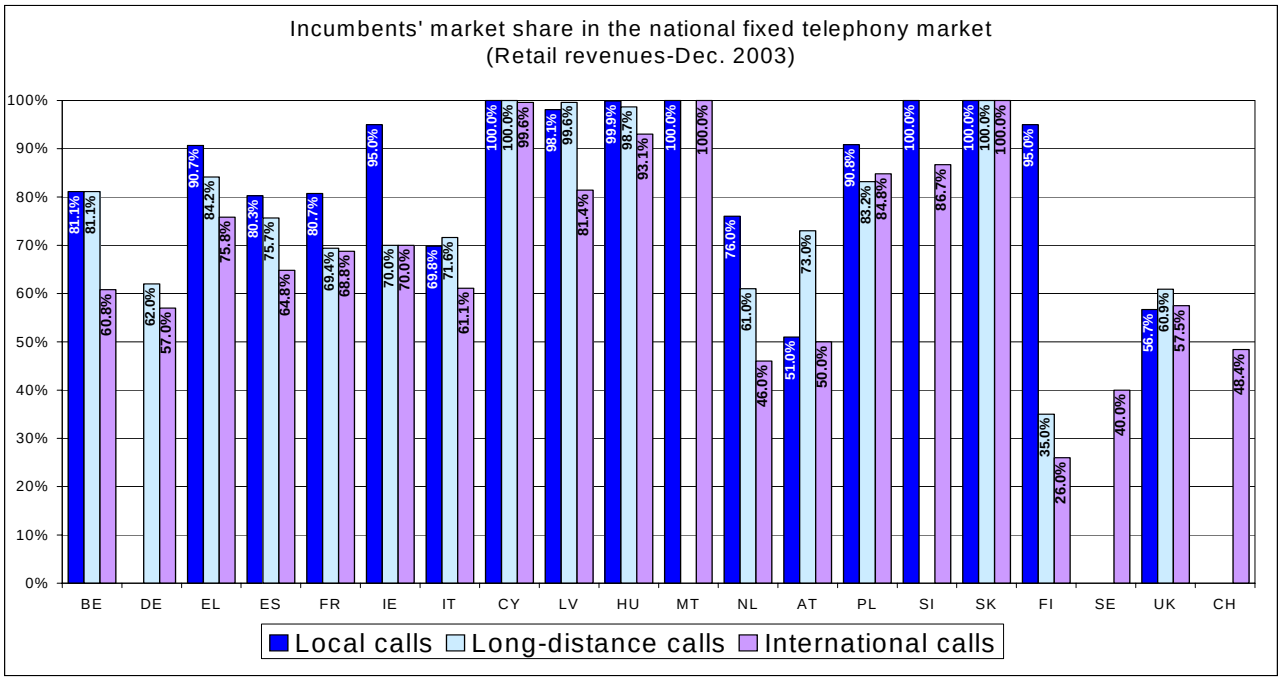
Source for Switzerland: OFCOM Switzerland.
Note: the overall market share of the fixed calls does not include Internet calls.

The market shares in the fixed network market (Figure 13a) of the Swiss incumbent (Swisscom) differ quite markedly from the European market shares. Whereas the European incumbents are losing market shares relatively uniformly in all the markets examined, two contrary developments can be observed in Switzerland: unlike in the EU, in Switzerland the incumbent's market shares have increased slightly for national (local + long-distance) and international calls in 2003, but remain well below the European values. On the other hand, the market share for calls from the fixed network to mobile networks fell between December 2000 and December 2001 by almost 20 points. This evolution is essentially explained by the fact that new mobile telephony operators started to attract a certain number of customers which led to a reduction of the incumbent's market share. Market share was also falling in the local call segment: from the end of 2001 it fell within a year from 85% to approximately 76%. This shift may also be due to the introduction of the closed numbering plan in March 2002, among other things. Following the entry into force of this new numbering plan, the historic operator changed its charging system to offer only one tariff, regardless of distance. Its competitors, for the most part, followed the trend. A general reshuffle resulted from this.

The following two charts show the incumbents' market share in the local, long-distance and international call market by retail revenues and by minutes of outgoing traffic. The local calls market includes both local phone calls and local calls to internet. As already explained before, local and long-distance are no longer displayed for Switzerland.

In comparison with the other European incumbents, at the end of 2003, in terms of revenues (Figure 14), Swisscom international calls market share is lower than in most european countries. The sole exceptions are the market shares for international calls in Finland, Sweden and the Netherlands. A similar situation also prevailed in the case of market shares based on minutes (Figure 15): in this case, only the incumbents of Austria, UK and Germany have a lower market share in the international calls segments.

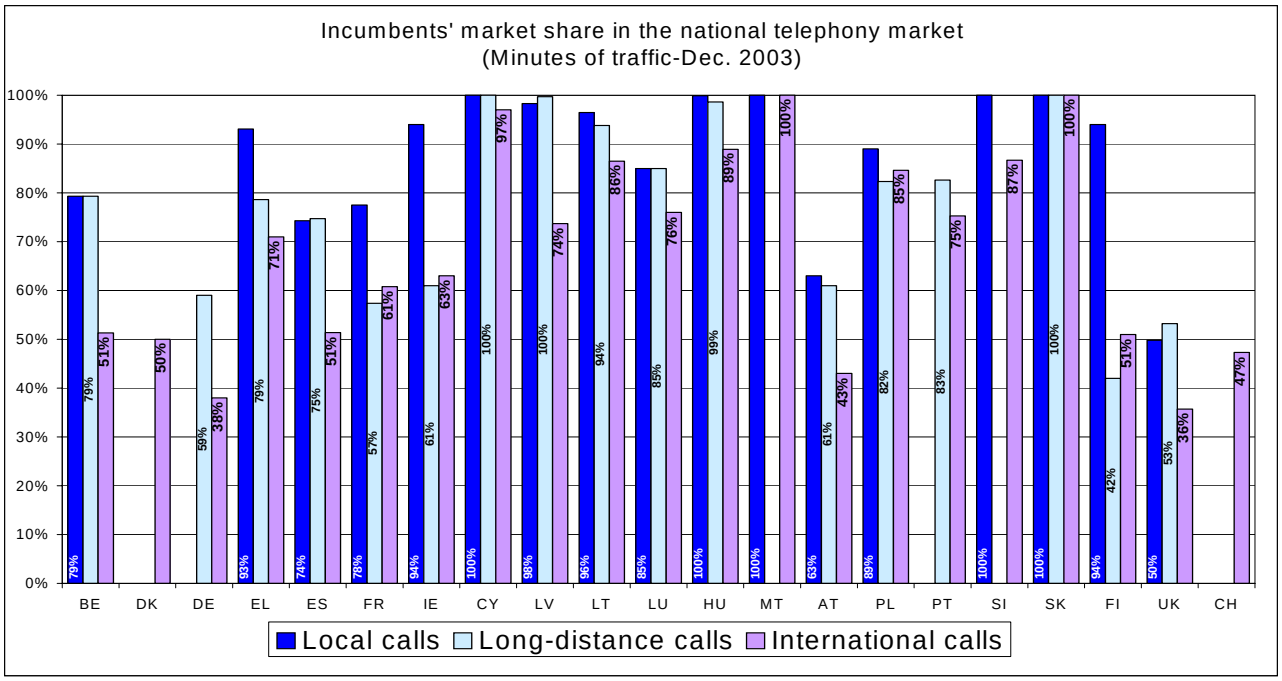
Figure 14



Data for local calls include calls to the internet.
Belgium: No distinction between local and national calls
Czech Republic: Confidential data.
Denmark: Figures not available. No distinction between local and long-distance calls
Estonia: Confidential data.
Ireland: Operators classify internet calls differently. They may be included in other call categories such as local only, national as well as internet, therefore market shares are varied.
Italy: Due to a change in the operator basket and in the analytical methodologies, the data are not comparable with data released in 2002, which have been recalculated on the new basis
Lithuania: Only the incumbent's market share on the basis of total revenues from fixed telephony is available
Luxembourg: Data on revenues are not available. Data on traffic is a NRA estimate.
Hungary: VoIP is excluded as an access service, but included when used as a means of transport.
The Netherlands: Figures are indicative.
Austria: Figures refer to September 2003.
Slovenia: No distinction between local and long-distance.
Finland: Figures for local call share is the combined market share of TeliaSonera, Elisa and Finnet. 2002 figure was an estimate. Figures for long-distance and international calls include TeliaSonera only.
Sweden: Detailed data are unavailable. Only a figure for the whole national fixed calls market, including internet, is available (56%).
United Kingdom: Market shares for the quarter to March 2004. Figures have been updated to reflect revised data received from operators

Source for Switzerland: OFCOM Switzerland.

Figure 15

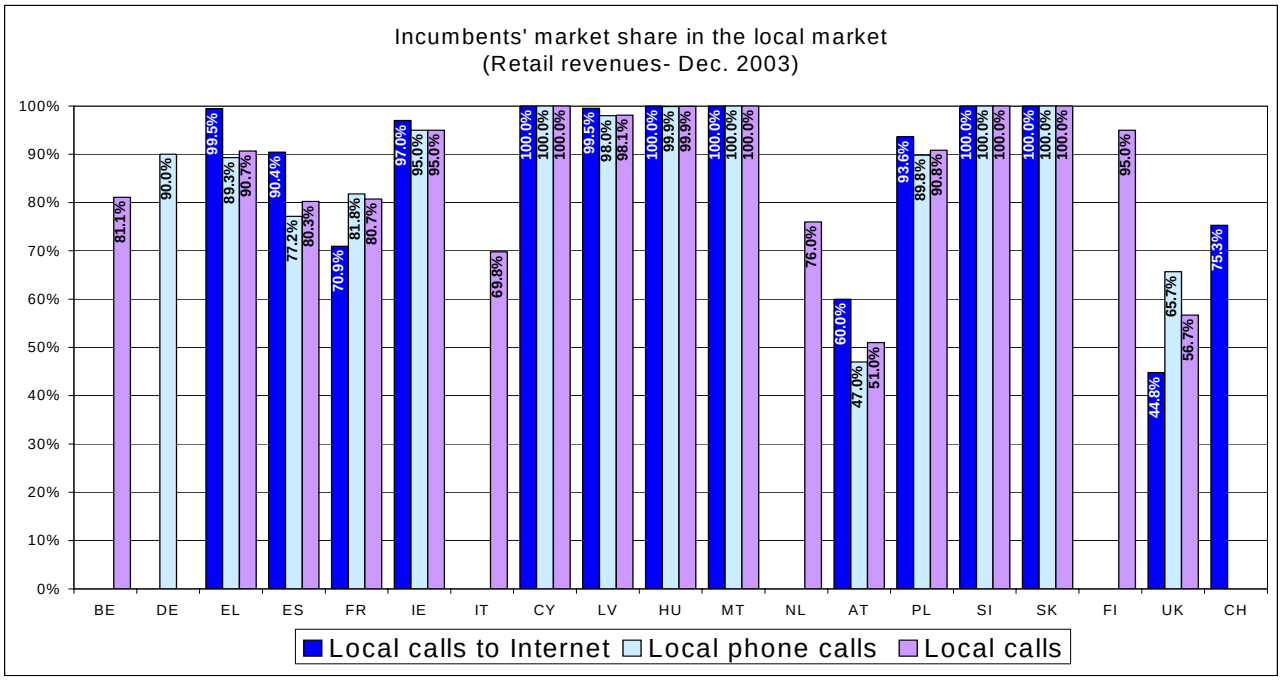


Data for local calls include calls to the internet.
Belgium: No distinction between local and national calls
Czech Republic: Confidential data.
Denmark: Detailed data are unavailable. Only a figure for the whole national fixed calls market, including internet, is available (63.64%).There is no distinction between local and long-distance calls
Estonia: Confidential data.
Ireland: Operators classify internet calls differently. They may be included in other call categories such as local only, national as well as internet, therefore market shares are varied.
Italy: Due to a change in the operator basket and in the analytical methodologies, the data are not comparable with data released in 2002, which have been recalculated on the new basis
Lithuania: Only the incumbent's market share on the basis of total revenues from fixed telephony is available
Luxembourg: Data on revenues are not available. Data on traffic is a NRA estimate. Local phone calls do not exist as a separate category from long-distance calls
Hungary: VoIP is excluded as an access service, but included when used as a means of transport.
The Netherlands: Figures are indicative.
Austria: Figures refer to September 2003.
Portugal: Data on traffic are estimates.
Slovenia: No distinction between local and long-distance.
Finland: Figures for local call share is the combined market share of TeliaSonera, Elisa and Finnet. 2002 figure was an estimate. Figures for long-distance and international calls include TeliaSonera only.
United Kingdom: Market shares for the quarter to March 2004. Figures have been updated to reflect revised data received from operators

Source for Switzerland: OFCOM Switzerland.

The following charts (Figures 16 and 17) show the incumbents' market share in the local calls market by retail revenues and by minutes of outgoing traffic. Where possible, separate figures for local phone calls and local calls to internet are provided.

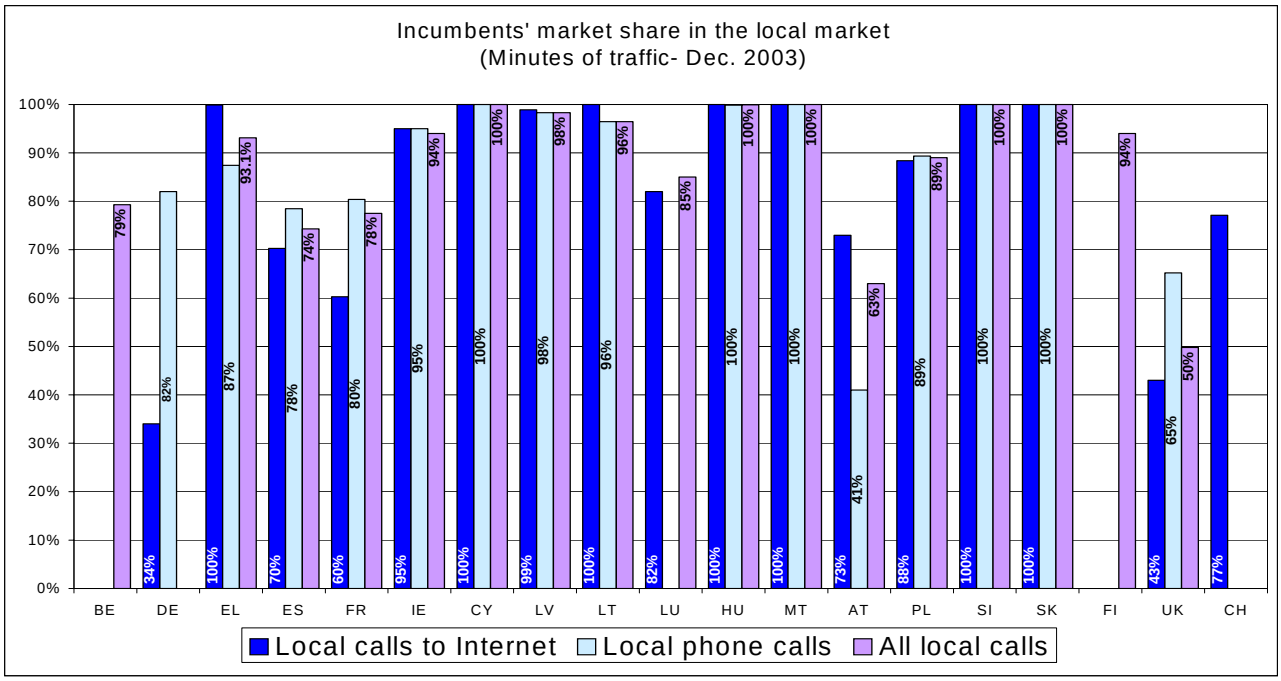
Figure 16



Belgium: No distinction between local and national calls
Czech Republic: Confidential data.
Denmark: Figures not available. No distinction between local and long-distance calls
Estonia: Confidential data.
Ireland: Operators classify internet calls differently. They may be included in other call categories such as local only, national as well as internet, therefore market shares are varied.
Italy: Due to a change in the operator basket and in the analytical methodologies, the data are not comparable with data released in 2002, which have been recalculated on the new basis
Lithuania: Only the incumbent's market share on the basis of total revenues from fixed telephony is available
Luxembourg: Data on revenues are not available. Data on traffic is a NRA estimate.
Hungary: VoIP is excluded as an access service, but included when used as a means of transport.
The Netherlands: Figures are indicative.
Austria: Figures refer to September 2003.
Slovenia: No distinction between local and long-distance.
Finland: Figures for local call share is the combined market share of TeliaSonera, Elisa and Finnet. 2002 figure was an estimate. Figures for long-distance and international calls include TeliaSonera only.
Sweden: Detailed data are unavailable. Only a figure for the whole national fixed calls market, including internet, is available (56%).
United Kingdom: Market shares for the quarter to March 2004. Figures have been updated to reflect revised data received from operators

Source for Switzerland: OFCOM Switzerland.

Figure 17

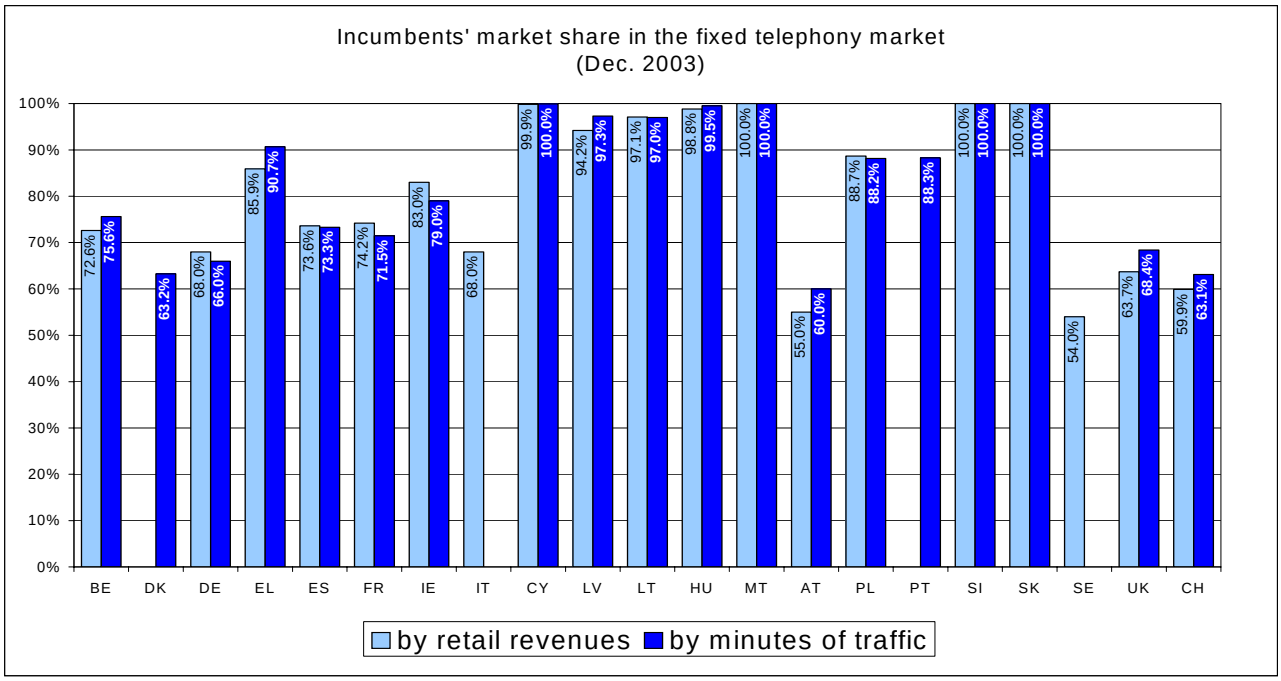


Belgium: No distinction between local and national calls
Czech Republic: Confidential data.
Denmark: Figures not available. No distinction between calls to internet and local phone calls
Estonia: Confidential data.
Ireland: Operators classify internet calls differently. They may be included in other call categories such as local only, national as well as internet, therefore market shares are varied.
Italy: Due to a change in the operator basket and in the analytical methodologies, the data are not comparable with data released in 2002, which have been recalculated on the new basis
Lithuania: Only the incumbent's market share on the basis of total revenues from fixed telephony is available
Luxembourg: Data on revenues are not available. Data on traffic is a NRA estimate. Local calls do not exist as a separate category from long-distance calls
Hungary: VoIP is excluded as an access service, but included when used as a means of transport.
The Netherlands: Figures are indicative.
Austria: Figures refer to September 2003.
Portugal: Data on traffic are estimates.
Slovenia: No distinction between local and long-distance.
Finland: Figures for local call share is the combined market share of TeliaSonera, Elisa and Finnet. 2002 figure was an estimate. Figures for long-distance and international calls include TeliaSonera only.
United Kingdom: Market shares for the quarter to March 2004. Figures have been updated to reflect revised data received from operators

Source for Switzerland: OFCOM Switzerland.

Figure 18 shows the market shares in terms of minutes and revenue for calls from the incumbent's fixed network calls in general. It has to be noted that Internet local calls are not included in the Swiss data. With 63.1% of market shares expressed in minutes, Swisscom is the historic operator which has the second lowest position after Austria. The situation is quite similar in terms of revenue, since Swisscom has the third lowest market share in comparison to the European countries.

Figure 18

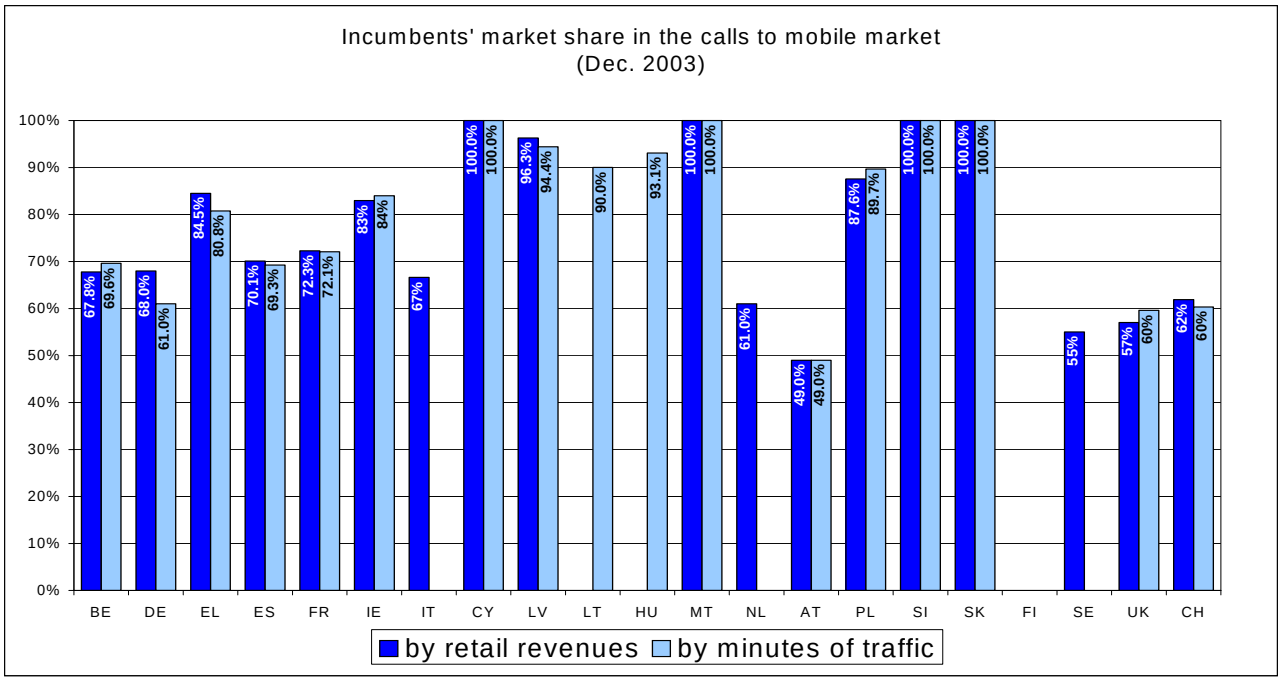


Market share for all fixed calls including internet, except in Germany and Lithuania, where the figures for market shares based on traffic do not include internet.
Belgium: No distinction between local and national calls
Czech Republic: Confidential data.
Estonia: Confidential data.
Ireland: Operators classify internet calls differently. They may be included in other call categories such as local only, national as well as internet, therefore market shares are varied.
Italy: Due to a change in the operator basket and in the analytical methodologies, the data are not comparable with data released in 2002, which have been recalculated on the new basis
Lithuania: Only the incumbent's market share on the basis of total revenues from fixed telephony is available
Luxembourg: Data on revenues are not available. Data on traffic is a NRA estimate.
Hungary: VoIP is excluded as an access service, but included when used as a means of transport.
The Netherlands: Figures are indicative.
Austria: Figures refer to September 2003.
Portugal: Data on traffic are estimates.
Slovenia: No distinction between local and long-distance.
Finland: Figures for local call share is the combined market share of TeliaSonera, Elisa and Finnet. 2002 figure was an estimate. Figures for long-distance and international calls include TeliaSonera only.
United Kingdom: Market shares for the quarter to March 2004. Figures have been updated to reflect revised data received from operators

Source for Switzerland: OFCOM Switzerland.

Figure 19 shows the market shares in terms of minutes and revenue for calls from the incumbent's fixed network to a mobile network. With 60% of market shares expressed in minutes, Swisscom positioned itself in the leading quarter of the historic operators which possess the lowest market shares. Swisscom's market share in terms of minutes is slightly lower than the one for revenue (62%). These values place Swisscom in fourth place behind Austria, Sweden and Great Britain. From the small difference which exists between these two values, it can be concluded that at the end of 2003 Swiss customers of the incumbent might have to pay slightly more for calls from the fixed to the mobile network than customers of its competitors.

Figure 19



Czech Republic: Confidential data.
Denmark: Figures not available
Estonia: Confidential data.
Ireland: Operators classify internet calls differently. They may be included in other call categories such as local only, national as well as internet, therefore market shares are varied.
Italy: Due to a change in the operator basket and in the methodologies of analysis, the data are not comparable with data released in 2002, which have been recalculated on the new basis
Lithuania: Only the incumbent's market share on the basis of total revenues from fixed telephony is available
Luxembourg: Data on revenues are not available. Data on traffic is a NRA estimate.
Hungary: VoIP is excluded as an access service, but included when used as a means of transport.
The Netherlands: Figures are indicative.
Austria: Figures refer to September 2003.
Slovenia: No distinction between local and long-distance.
Finland: Figures for local call share is the combined market share of TeliaSonera, Elisa and Finnet. 2002 figure was an estimate. Figures for long-distance and international calls include TeliaSonera only.
United Kingdom: Market shares for the quarter to March 2004. Figures have been updated to reflect revised data received from operators

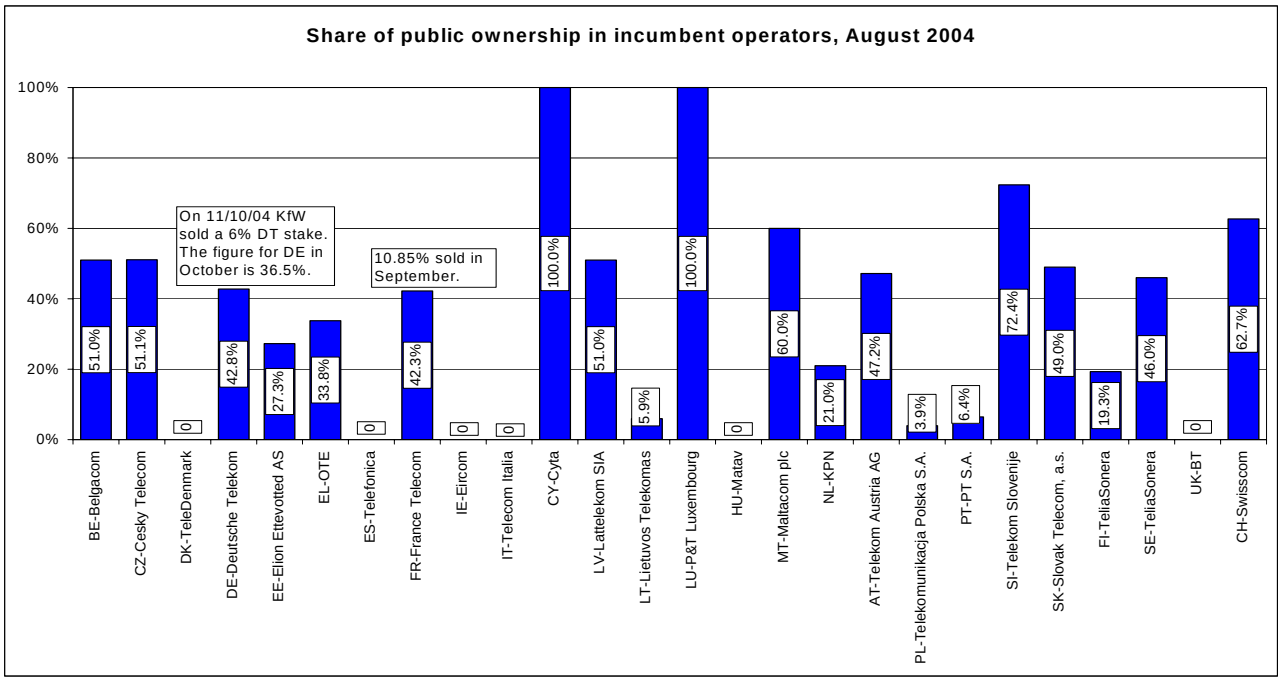
Source for Switzerland: OFCOM Switzerland; Swisscom F-20.

2.5. PUBLIC OWNERSHIP OF THE INCUMBENT OPERATOR

The chart below shows the share of public ownership in the incumbent operators. Only in Cyprus and Luxembourg is the incumbent fixed operator fully State owned. In six countries the incumbent is fully privatised (Denmark, Spain, Ireland, Italy, Hungary and the United Kingdom), although in some cases a golden share mechanism exists. In most other countries the State ownership is still significant at around 40%, with 5 countries (Belgium, Czech Republic, Latvia, Malta, Slovenia and Switzerland) where the State owns more than 50% of shares. The most recent sales of State shares took place in Germany and France.

The public ownership in Swisscom (62.7%) seems to be rather high in regard with the other European countries. Only Slovenia, Cyprus and Luxembourg have a higher proportion. In many countries that proportion is under 50%, meaning that the state is no longer dominant. Few countries (Ireland, Italy, Denmark, UK, Hungary and Spain) have already totally privatized their incumbent.

Figure 20



Source for Switzerland: Swisscom F-20.

3 CONSUMERS' CHOICE OF FIXED OPERATORS

This section analyses the fixed voice telephony market from the point of view of consumers.

The data presented below have been provided by the national regulatory authorities and, unless otherwise indicated, report the position as at July 2004. Figures for countries not included in the charts are not available. Figures are not always comparable with those published in previous reports due to changes in the methodologies and/or in the classifications used by the Member States. Most Member States have revised their methodologies in 2004 resulting in lower figures than those reported in previous reports for both local calls and long-distance/international calls.

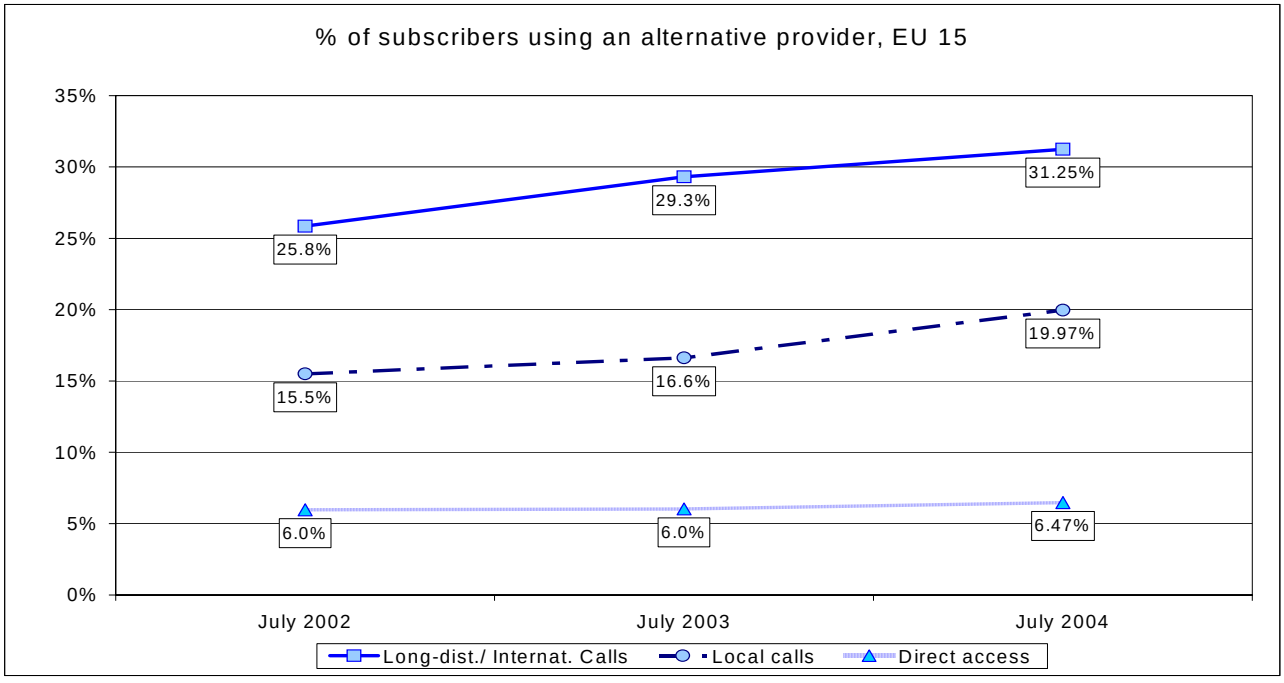
Information on consumers' use of alternative providers is unavailable in the majority of the New Member States.

3.1. PERCENTAGE OF SUBSCRIBERS ACTUALLY USING AN ALTERNATIVE PROVIDER OTHER THAN THE INCUMBENT

Incumbents' customers are more and more aware of the possibility of using an alternative provider, either by dialling a call-by-call prefix (*carrier selection*) or by choosing to route all calls by default to the network of an alternative operator (*carrier pre-selection*). The use of an alternative operator through carrier selection/carrier pre-selection does not exclude the possibility of also using the incumbent's services. *Direct access* is also available to users through alternative operators' proprietary wireline/wireless access or through unbundled local loops leased from the incumbent.

As at July 2004, 31% of EU15 subscribers used an alternative provider to route long-distance and international calls, while only 20% were using alternative providers for local calls. At the same time, direct access from alternative providers was used by 6.5% of EU15 subscribers. Since last year, the percentage of subscribers using an alternative provider has grown by 0.5 percentage points for direct access, 3.5 points for long-distance/international calls and almost 2 points for local calls.

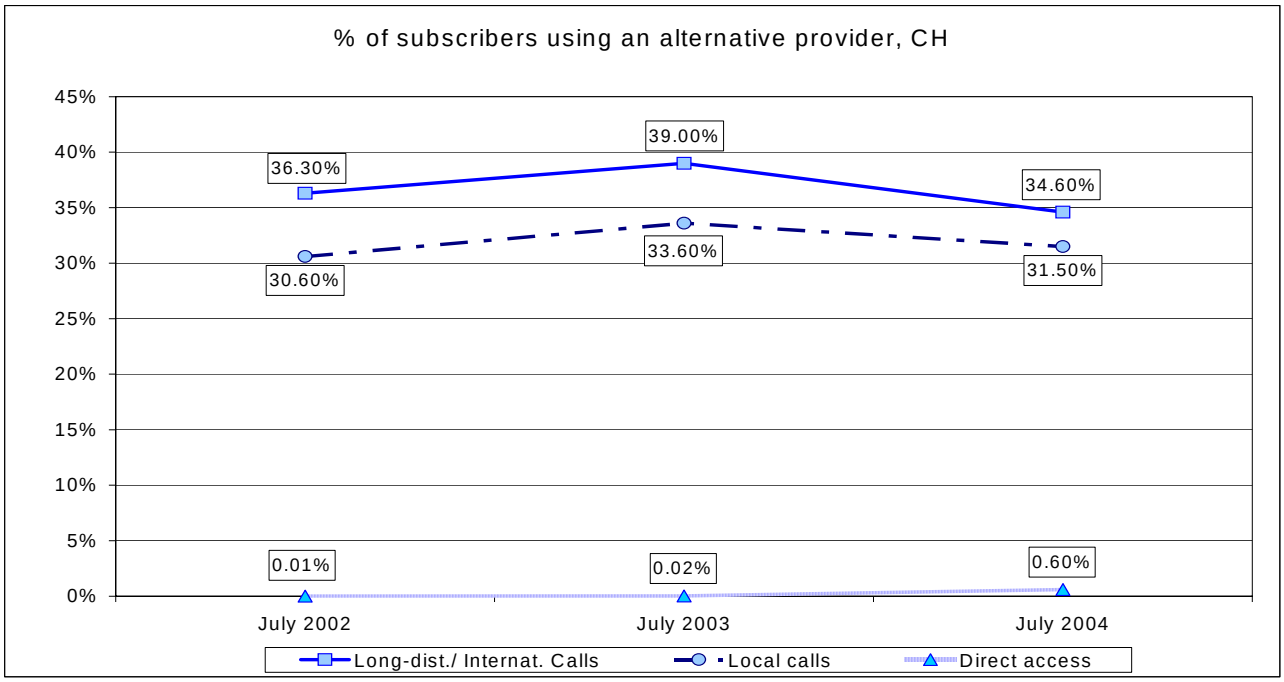
Figure 21



Member States not included in the EU weighted average:
Local: 2004: The Netherlands, Portugal. 2003: Ireland, Italy, the Netherlands, Austria, Portugal. 2002: Ireland, Italy, the Netherlands, Austria, Portugal, France
Long distance/int.: 2004: The Netherlands (data for United Kingdom refer to 2003). 2003: Ireland, the Netherlands, Italy, Austria. 2002: Ireland, the Netherlands, Italy, Austria, Germany, France.
Direct access: 2004: Ireland, the Netherlands. 2003: Ireland, the Netherlands, Austria. 2002: Ireland, the Netherlands, Austria, France, Portugal.

For the last three years, about one of three consumers was making use of the services of alternative providers to make local or long-distance/international calls in Switzerland. In 2004, this corresponds approximately to the European average for the local calls. In regard to the long-distance/international calls, Switzerland is about 10 points higher than the weighted European average. The picture is different for direct connections: due to a lack of unbundling possibilities and only rudimentary alternative access structures able to transmit voice traffic, almost 100% of connections are offered by the incumbent.

Figure 21a



Source for Switzerland: OFCOM Switzerland.
Note: status end 2001 for the figure representing 2002, status end 2002 for the figure representing 2003 and status end 2003 for the figure representing 2004.

The methodology for the calculation of the percentage of subscribers (residential + business) actually using a provider other than the incumbent operator is the following:

1- LOCAL CALLS: x:y

X = sum of all alternative operators' subscribers (residential + business) with CPS contract + sum of all alternative operators' subscribers (residential + business) with direct access for voice telephony (ULL and proprietary infrastructure)

Y = total number of residential + business subscribers of the incumbent and new entrants, with a standard/party/group telephone lines access. Direct telephone line access provided by an alternative operator can either be through proprietary infrastructure or full ULL.

2-LONG DISTANCE & INTERNATIONAL CALLS: x:y

X = sum of all alternative operators' subscribers (residential + business) with CPS contract + 50% of the sum of all alternative operators' subscribers (residential + business) with CS contract + sum of all alternative operators' subscribers (residential + business) with direct access for voice telephony (ULL and proprietary infrastructure).

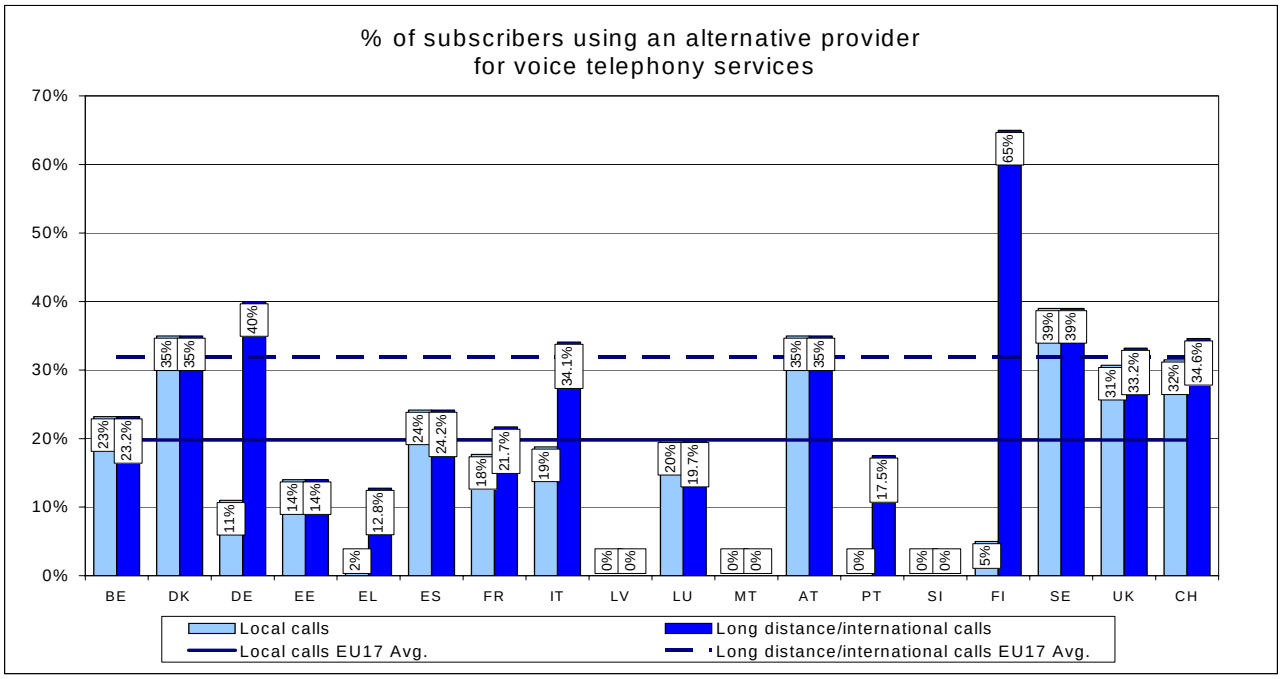
Y = total number of residential and business subscribers of the incumbent and new entrants, with a standard/party/group telephone lines access. Direct telephone line access provided by an alternative operator can either be through proprietary infrastructure or full ULL (in the latter case, please consider the number of unbundled active lines, and not the total number of unbundled lines).

3-DIRECT ACCESS

Total number of subscribers with direct access, fully ULL connection or with a cable access owned by an alternative operator

The following charts show the % of subscribers using an alternative provider for voice telephony services through carrier selection, carrier pre-selection and direct access. Where available, separate figures for local and long-distance/international calls are given.

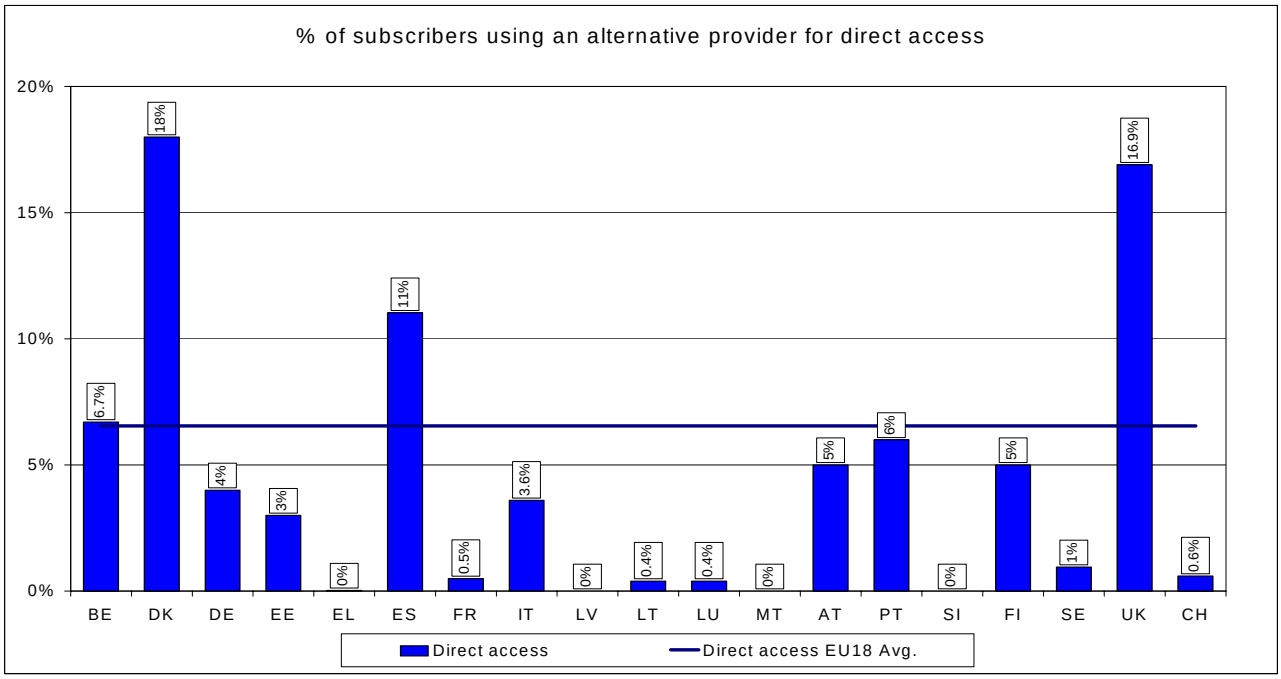
Figure 22



Belgium: Data refer to 31/12/2003.No distinction between local, national and international calls.
Denmark: No distinction between local, national and international calls. Only active subscriptions to CPS in the last 3 months are included with a weighting of 25%. The figure therefore is likely to be underestimated
Greece: Data refer to 31/12/2003.
France: Correction of data for previous reports so as to be comparable with 10th report. Data of 8th report are not comparable to those of 9th and 10th reports,
Italy: Data refer to 31/12/2003. Data are not comparable with that of previous years.
Luxembourg: No distinction local/long-distance/international.
Austria: Estimate for CPS only, no distinction between local/long-distance/international calls.
Portugal: Not available for local calls. Data for 2003 and 2002 have been adjusted following a redefinition of the indicators and a new data collection. Data for 2002 and 2003 are estimated based on the new methodology.
Estonia: No distinction between local and national calls.
Lithuania: Data available for direct access only.
Malta: No alternative operators
Slovenia: Alternative operators started in July 2004 with CPS and CS functionality.
Sweden: Data refer to CPS only by end 2003. No distinction between local and national calls.
United Kingdom: No data for long distance/international calls.
Cyprus, the Netherlands, Czech Republic, Hungary, Latvia, Poland, Slovakia: No data available

Source for Switzerland: OFCOM Switzerland. Data refer to the year 2003.

Figure 23



Belgium, Greece, Austria, Sweden: Data refer to 31/12/2003.
Denmark: Direct access inc. PSTN, ISDN and ULL.
France: Data of previous reports have been revised so as to be comparable with 10th report. Data of 8th report are not comparable to those of 9th and 10th report,
Italy: Data refer to 31/12/2003. Data are not comparable with that of previous years.
Malta: No alternative operators
Slovenia: Alternative operators started in July 2004.
Ireland, the Netherlands, Cyprus, Czech Republic, Hungary, Latvia, Poland, Slovakia: No data available

Source for Switzerland: OFCOM Switzerland. Data refer to the year 2003.

3.2. FACILITIES USED BY NEW ENTRANTS FOR THE PROVISION OF VOICE TELEPHONY

This section provides information on the facilities used by new entrants to offer voice telephony, particularly to residential users.

Data have been provided by the national regulatory authorities and refer to July 2004, except for Switzerland (year 2003).

Alternative operators can route users to their network either through a carrier selection system (CS), i.e. user dials a prefix on a call-by-call basis, or by carrier pre-selection (CPS), where the user's calls are routed to the new entrants' network on an automatic basis. New entrants can also provide direct access to users through proprietary wire/wireless access or through unbundled local loops leased from the incumbent.

These facilities are not mutually exclusive and very often the same operator uses the three at the same time depending on the type of customers (business or residential), the type of services (local or long-distance/international calls), the geographical area, the availability of ULL, etc. The following figures should therefore be read separately and not aggregated as country totals.

As at 1 July 2004, 835 operators were effectively providing voice telephone service at EU25 level, of which 518 did so by using carrier selection and 289 by carrier pre-selection. As indicated above, many operators use carrier selection and carrier pre-selection at the same time. This is in line with the figures for previous years. Around 2/3 of the new entrants that are operational in the European market offer voice telephony services through carrier selection and/or carrier pre-selection, and only 1/3 of them use direct access to customers.

The following two charts show the number of operators using carrier selection and/or carrier pre-selection by Member State at July 2004. Where possible, separate figures for types of calls are given; in the other cases separate data were not available or operators do not differentiate the facilities used by type of calls. In a number of countries operators do not differentiate between local and national calls.

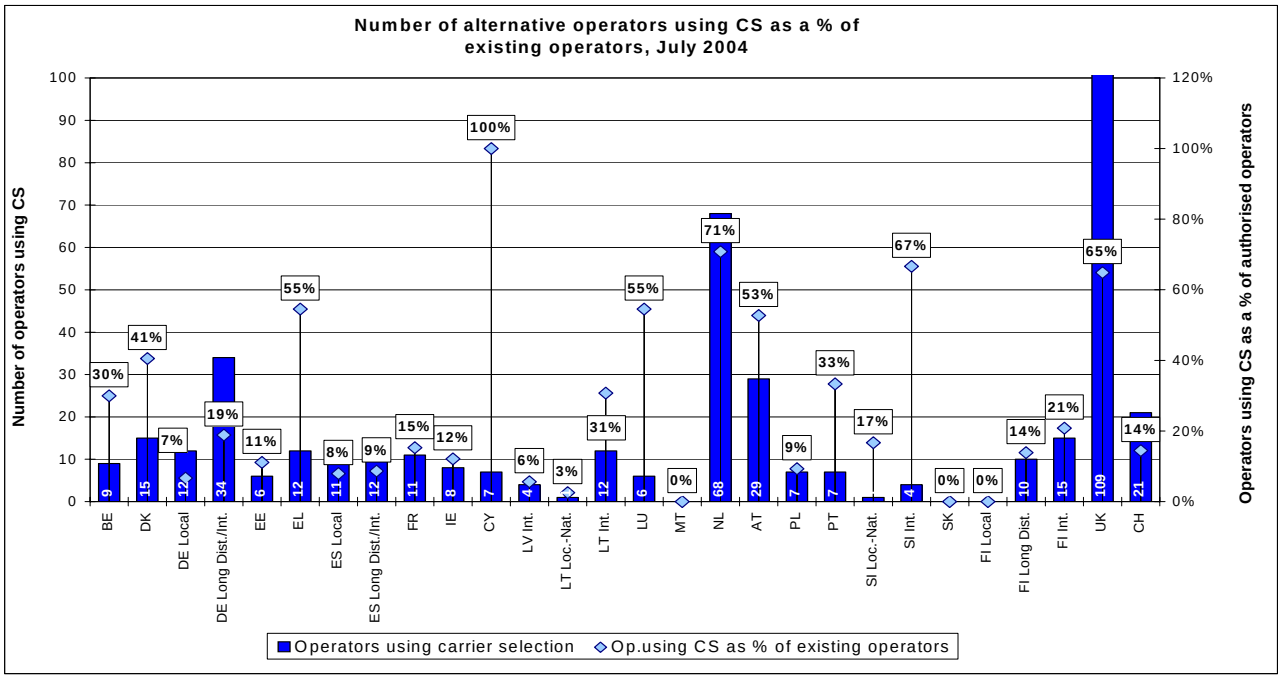
The number of operators using carrier selection and/or carrier pre-selection depends on the number of authorised operators, which can vary widely between countries.

For these reasons, an estimate of the number of operators using carrier selection and/or carrier pre-selection as a percentage of authorised operators is also shown. Moreover, the figures do not show to what extent the operators are offering services to residential and/or business users; nation-wide or only in local areas; all types of calls or only local or long-distance or international calls, etc.

In several countries the precise number of operators is unknown. The charts below are based on the estimated number of operators present in each Member State, even when some of these operators are not effectively providing services.

In Switzerland, according to Figure 24, there are 21 alternative operators offering CS commercially; this corresponds to only about 14% of the providers actually authorised for this service. Note, however, that given the high proportion of inactive operators in the Swiss market (cf. Figures 9 and 10), this percentage does not offer a sufficient guarantee in terms of representativeness and should not, therefore, be the subject of any speculation. Note again that when one examines the number of alternative operators having access to CS, Switzerland is in the first quarter of the league table.

Figure 24

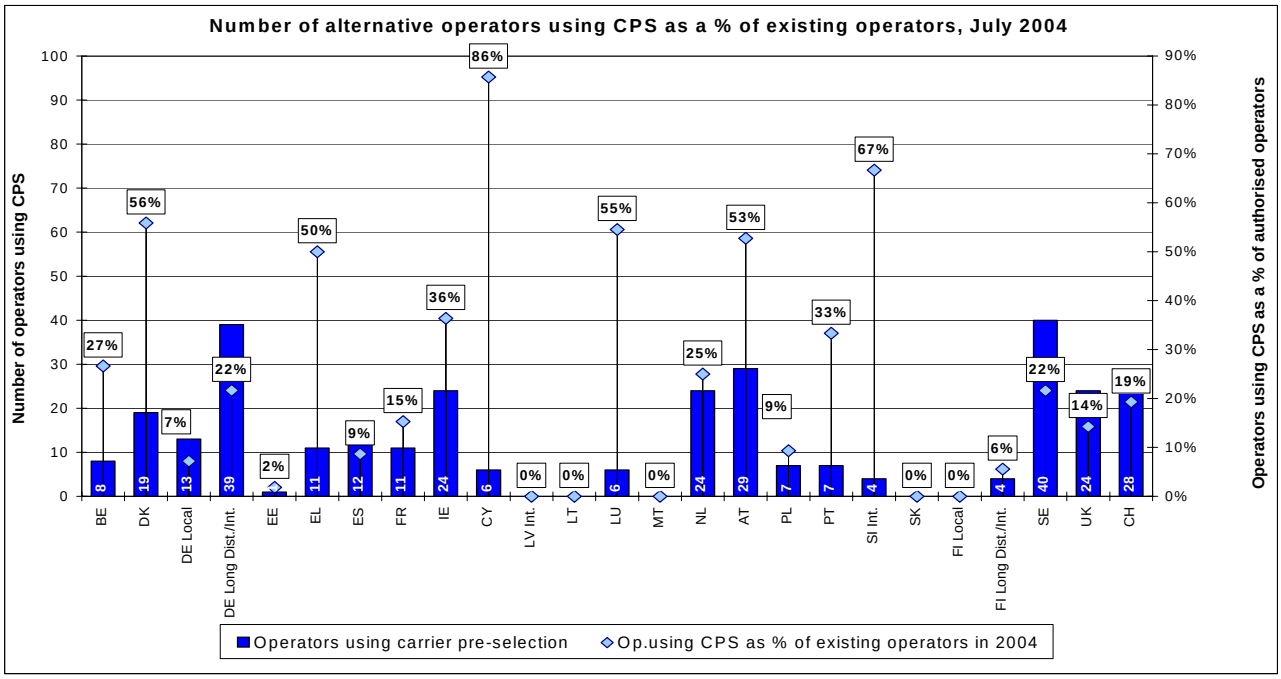


Belgium: Figures refer to national calls only and not to international calls. There is no distinction between local and national calls.
Denmark: Value is a minimum.
Estonia: No distinction between local and national calls.
France: The 11 operators displayed in the chart provide services to residential customers.
Ireland: No distinction between local, long-distance and international calls.
Cyprus: Commercial provision of CS and CPS service started in January 2004.
Latvia: CS is only available for international calls. CS for local and national calls (no distinction) will be available from 1.1.06.
Malta: No alternative operators
The Netherlands: No distinction between local and long distance.
Austria: Data refer to 31/12/2003.
Poland: Figures refer to the number of operators that have access to a network number (NDS) and that are actually offering public voice telephony.
Portugal: There are 9 indirect access operators of which 7 are offering services to residential customers on a call-by-call basis.
Slovakia: CS, CPS and LLU not established yet
United Kingdom: As at 1/4/04.
Czech Republic, Italy, Hungary, Slovenia, Sweden: No data available. CS and CPS are available since 1.1.2004 in Hungary. In Slovenia CS is available since mid 2003 and CPS since January 2004.

Source for Switzerland: OFCOM Switzerland. Data refer to the year 2003.

The situation with CPS appears similar (Figure 25): 28 operators are active in the market; this corresponds to about 19 % of all authorised operators. Once again, this percentage must be treated with caution. If one considers the number as an absolute value, Switzerland's situation is relatively favourable, since only four countries have a higher number of alternative operators using CPS, namely Germany (long-distance and international calls only), Sweden and Austria (Italy which also had a high number of operators in 2003 is no longer included in the comparison).

Figure 25



Belgium: Figures refer to national calls only and not to international calls. There is no distinction between local and national calls.
Denmark: Value is a minimum.
Estonia: No distinction between local and national calls.
France: The 11 operators displayed in the chart provide services to residential customers.
Ireland: No distinction between local, long-distance and international calls.
Cyprus: Commercial provision of CS and CPS service started in January 2004.
Latvia: CPS is only available for international calls. CPS for local and national calls (no distinction) will be available from 1.7.06.
Malta: No alternative operators
The Netherlands: No distinction between local and long distance.
Austria: Data refer to 31/12/2003.
Poland: Figures refer to the number of operators that have access to a network number (NDS) and that are actually offering public voice telephony.
Portugal: There are 9 indirect access operators of which 7 are offering services to residential customers on a call-by-call basis.
Slovakia: CS, CPS and LLU not established yet.
Sweden: Estimated.
United Kingdom: As at 1/4/04.
Czech Republic, Italy, Hungary, Slovenia: No data available. CS and CPS are available since 1.1.2004 in Hungary. In Slovenia CS is available since mid 2003 and CPS since January 2004.

Source for Switzerland: OFCOM Switzerland. Data refer to the year 2003.

4.1. FIXED-TO-FIXED INTERCONNECTION CHARGES

This section analyses the interconnection charges for call termination on the incumbent's fixed network. The figures show charges per minute based on the first three minutes of a call at peak-time, VAT excluded.

The figures may have been approved by the NRA or simply agreed between operators, where the legal framework does not require NRA approval. The following chart shows the EU weighted average for the interconnection charges since 2000 for local level, single and double transit. The exchange rates for 2004 have been applied to the years 2000-2003 for the non euro-zone countries. Since August 2000, the EU weighted average charge for call termination on fixed networks has decreased by 55% for single transit, by 36% at local level, and by 22% for double transit. Major reductions took place between 2000 and 2002 and again during the past 12 months, especially as regards single and double transit, with annual reductions of 6% and 8% respectively. The annual reduction for local level was 5%. Among this generalised downward trend, the major changes since last year have occurred in the United Kingdom (-15%) and Belgium (-12%) for local level termination, Sweden (-25%), Germany (-10%) and Belgium (-10%) for single transit and Greece (-39%), Germany (-18%) and Portugal (-10%) for double transit call termination.

Figure 26a shows the same evolution (2000-2004), but for Switzerland. During the period in question, interconnection charges for double transit fell by 26.4%, i.e. slightly more than in the Union countries on average (22.2%). As far as single transit charges are concerned, these have fallen slightly more, with a reduction of 34.8% as against 35.4% for the Union. In 2004, the differences between the prices charged on average in the Union countries and the prices charged in Switzerland remained substantial. Thus the price of double transit is 17.6% higher in Switzerland and single transit is 23% higher. It should be mentioned once again that in Switzerland there are no local termination charges since the service is not offered. This means that an operator wishing to terminate a call in a third-party network must pay a regional interconnection charge at least (cf. single transit).

There is a strong correlation between the levels of the charges and the timing of liberalisation of the market. Interconnection charges, for most of the new Member States, are significantly higher than those for EU15 (74% higher for local level, 60% for single transit and 32% for double transit).

Figure 26

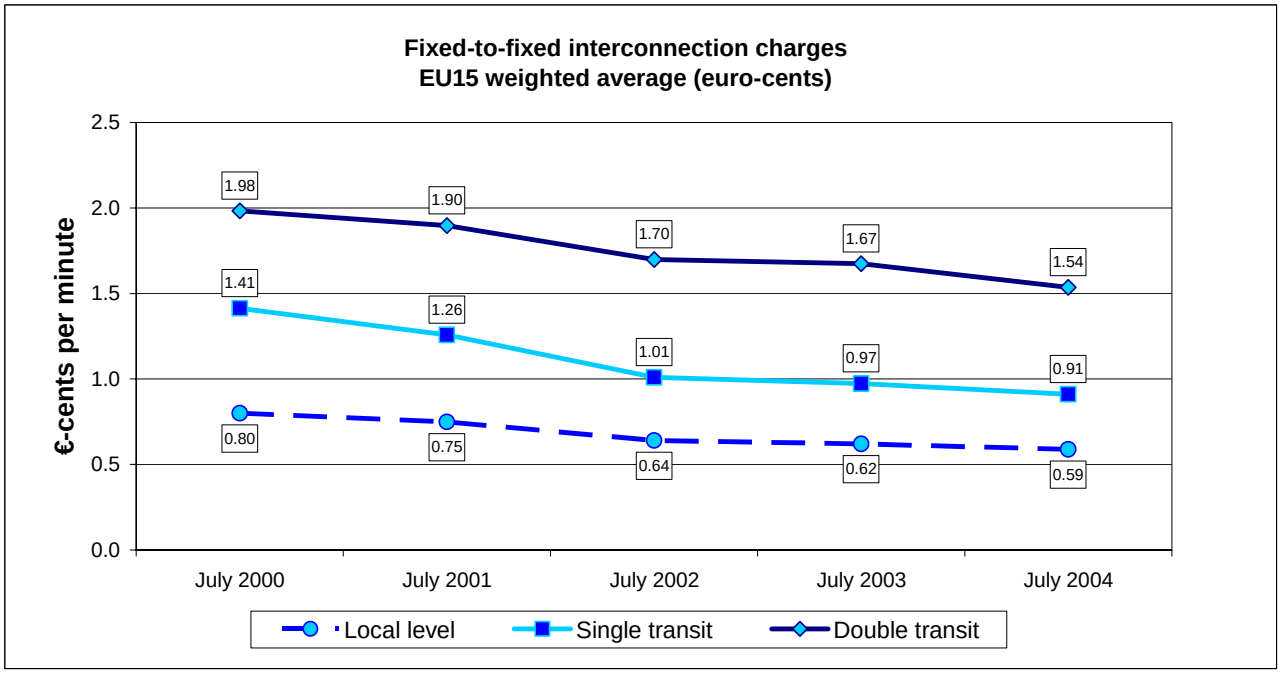
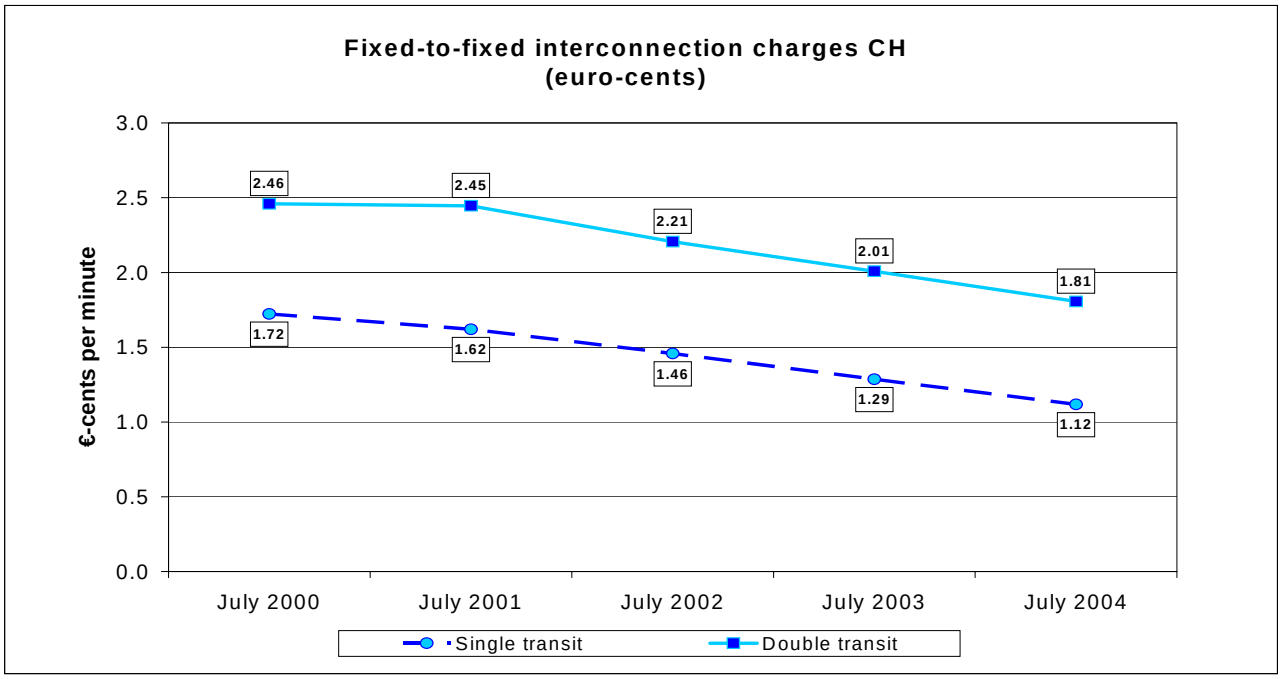


Figure 26a

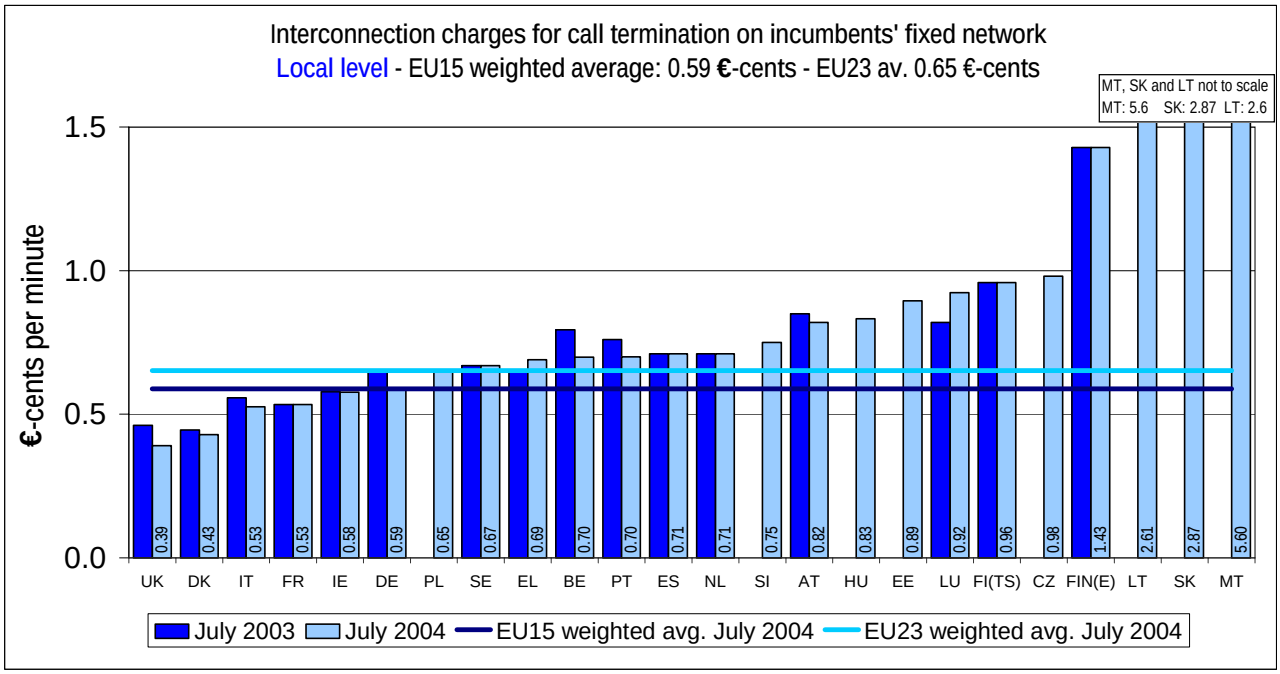


Source for Switzerland: Swisscom Price Manual up to and including Version 6.3.
Note: In Switzerland, single transit relates to regional call termination and double transit refers to national call termination. Local transit is not offered in Switzerland and is therefore not considered.

The following three charts show the interconnection charges for local level, single and double transit as of 1 July 2004. For the EU15 countries the values of July 2003 are also shown.

When one examines Figure 27, it is apparent that the situation contrasts greatly between countries. In fact, only six countries – Denmark, the United Kingdom, France, Italy, Ireland and Germany – have local interconnection charges lower than the weighted European averages (EU15 or EU25). Given that there are no local interconnection charges in Switzerland, they have had to be replaced by the minimum which an operator has to pay to terminate a call, i.e. the regional interconnection charges (cf. single transit). The absence of interconnection charges at local level explains, if only partially, the low ranking of Switzerland in the classification.

Figure 27

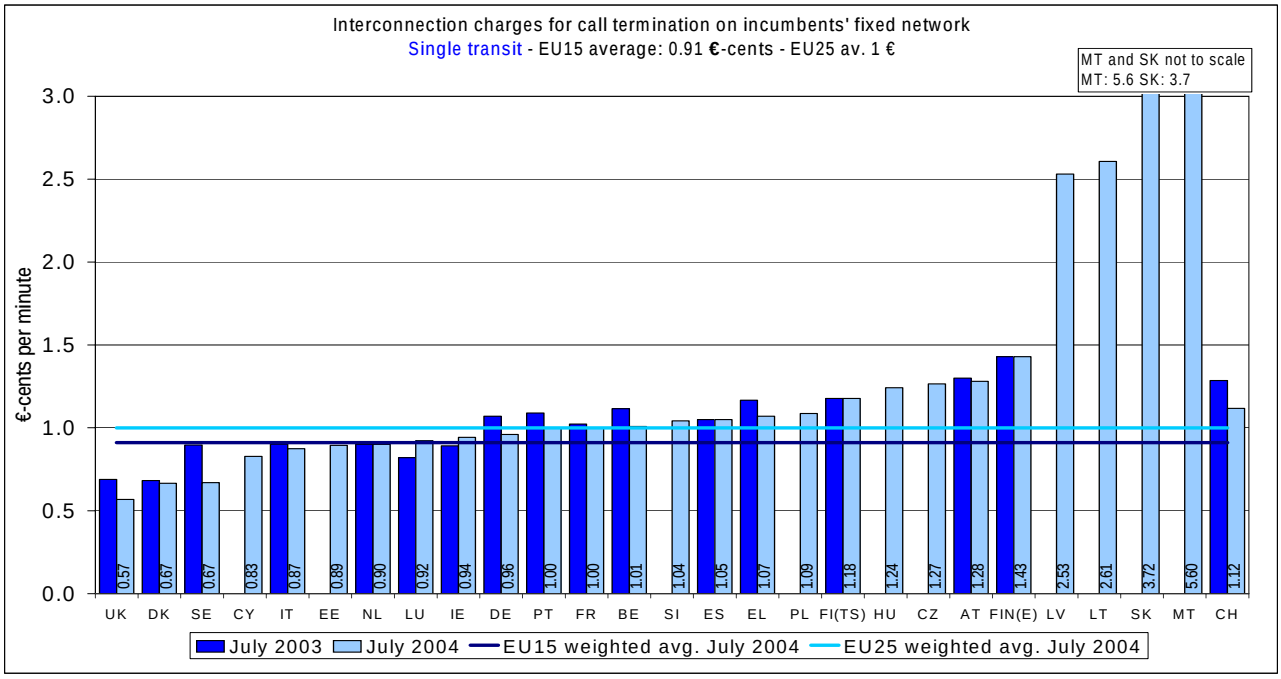


Cyprus, Latvia: no distinction between local and long-distance domestic calls.
Denmark, Sweden, United Kingdom: Figures for 2003 have been recalculated using the 2004 exchange rate.
Greece: Charges include the signalling and the 2Mbs Ports' cost. The audit for cost orientation for the year 2004 is in progress.
Finland: The charges of the 46 SMP operators differ. The interconnection price indicated here is based on the price of the two major SMP operators (TeliaSonera and Elisa).
Italy: Price does not include call set-up
Luxembourg: Including call set-up (not included in 2003)
Hungary: Prices refer to the main incumbent operator Matav
Malta: Only one interconnection level.
Austria: Charges according to a draft measure

Note: Local transit is not offered in Switzerland and is therefore not considered.

Figure 28 shows the 2004 interconnection charges for single transit and illustrates the variation which occurred between 2003 and 2004. As a result of the recorded decrease, Switzerland has improved its relative position to some extent. If we take into account the EU15 weighted average, Switzerland was the third most expensive country in 2003. In 2004, and in regards to the EU25, Switzerland is placed as the 10th most expensive country, before Hungary and behind Austria. At the other end of that scale, Denmark and the United Kingdom have the cheapest charges, which are well below the weighted European average.

Figure 28

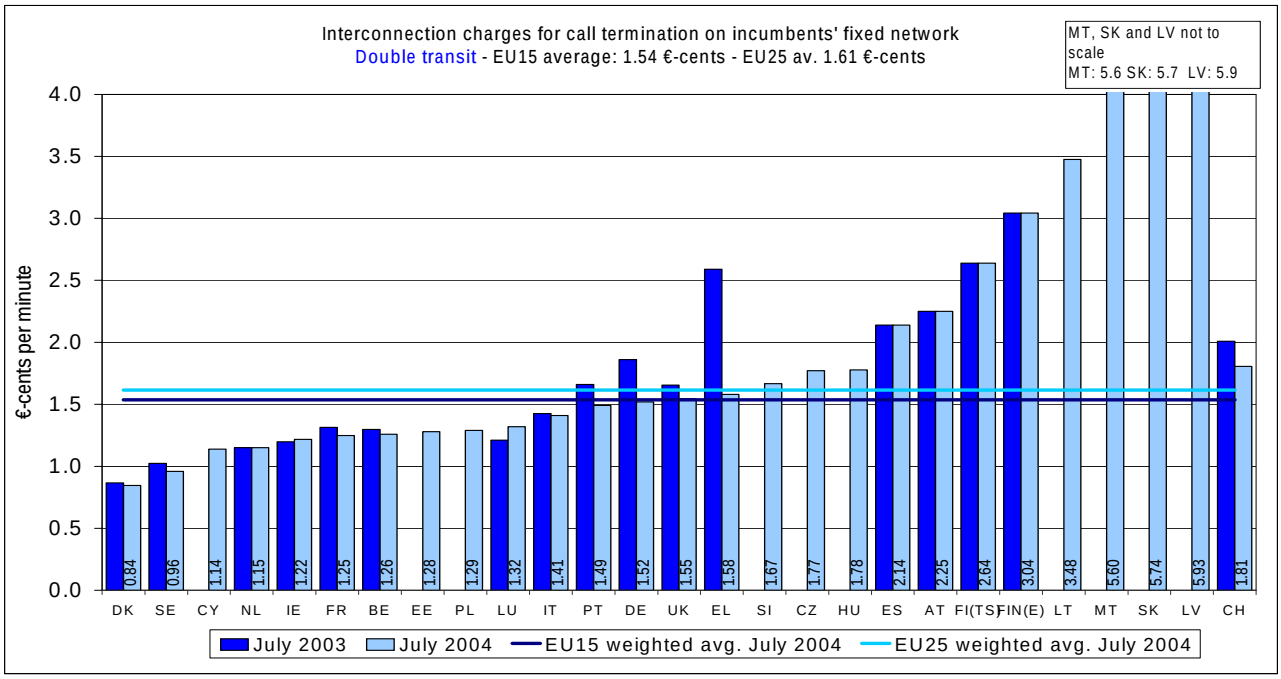


Denmark, Sweden, United Kingdom: Figures for 2003 have been recalculated using the 2004 exchange rate.
Greece: Charges include the signalling and the 2Mbs Ports' cost. The audit for cost orientation for the year 2004 is in progress.
Spain: All tariffs are per minute, time counted on a per-second basis. 0,0095 metropolitan traffic; 0,0105 single transit
Finland: The charges of the 46 SMP operators differ. The interconnection price indicated here is based on the price of the two major SMP operators (TeliaSonera and Elisa).
Italy: Price does not include call set-up
Luxembourg: Including call set-up (not included in 2003)
Hungary: Prices refer to the main incumbent operator Matav
Malta: Only one interconnection level.
Austria: Charges according to a draft measure

Source for Switzerland: Swisscom Price Manual up to and including Version 6.3.
Note: In Switzerland, single transit relates to regional call termination.

Figure 29 shows that the double transit charge in Switzerland (1.81 €-cents) was above the weighted European average in 2004 (+17.6%). Despite this, there are countries where the prices charged are higher than in Switzerland. Specifically, starting with the most expensive, these are Spain, Austria, Finland, Lithuania, Malta, Slovakia and finally Latvia. Denmark and Sweden are at the other end of the scale and are the only countries in which the price drops below the 1 €-cent mark.

Figure 29



Denmark, Sweden, United Kingdom: Figures for 2003 have been recalculated using the 2004 exchange rate.
Greece: Charges include the signalling and the 2Mbs Ports' cost. The audit for cost orientation for the year 2004 is in progress.
Finland: The charges of the 46 SMP operators differ. The interconnection price indicated here is based on the price of the two major SMP operators (TeliaSonera and Elisa).
Italy: Price does not include call set-up
Luxembourg: Including call set-up (not included in 2003)
Hungary: Prices refer to the main incumbent operator Matav
Malta: Only one interconnection level.
Austria: Charges according to a draft measure
United Kingdom: Data refer to a connection of more than 200km. For lengths of up to 100km the interconnection charge at double transit is 0.94 euro cents; and for distance between 100 and 200km it is 1.19 euro cents.

Source for Switzerland: Swisscom Price Manual up to and including Version 6.3.
Note: In Switzerland, double transit refers to national call termination

4.2. FIXED-TO-MOBILE INTERCONNECTION CHARGES

This section shows the per-minute interconnection charges for fixed call termination on the networks of mobile operators. Charges for call termination on the networks of 3G operators are not included.

In the following charts information is shown for 75 mobile operators in the EU (representing almost 100% of the EU mobile market). A total of 34 operators in the following EU countries have been designated as having significant market power in the national market for interconnection (SMP): Belgium, Czech Republic, Greece, Spain, France, Ireland, Italy, Cyprus, Latvia,, Hungary, Malta, Poland, Slovenia, Finland, Sweden and the United Kingdom. Given the different status of implementation of the new regulatory framework in each Member State, in some countries SMP is designated under the old framework, while in other countries it is based on the market analysis carried out by the national regulatory authorities. SMP operators cover 62% of the EU mobile market in terms of subscribers.

26 operators have been designated as SMP on the national mobile market (SMP-mobile) in 18 Member States: Belgium, Denmark, Greece, Spain, France, Ireland, Italy, Luxembourg, Portugal, Sweden, Cyprus, Czech Republic, Estonia, Hungary, Malta, Poland, Slovakia and Slovenia. In Germany, the Netherlands, Lithuania and Austria there are no operators designated as SMP or as SMP-mobile. We should note that in Switzerland there is no foundation on which to base any distinction between SMP and non-SMP mobile operators, because neither the Communications Commission nor the Competition Commission has to date pronounced on any dominance as part of a procedure whatsoever. However, Switzerland has nevertheless been added.

Charges are for calls originated in the same countries. In Finland there are no fixed-to-mobile termination charges. In the case of a call from a fixed network to a mobile network, local operators determine the local network charges and mobile operators determine the mobile call charges.

The per-minute interconnection fees are based on the first three minutes of a call at peak rate, except for the Netherlands, Ireland and Lithuania where an average peak/off-peak rate is given.

Data have been collected by the NRA, and refer to August 2004. Data for Germany was provided by Cullen International.

Figure 30 shows the national weighted average for SMP and non-SMP operators. The EU25 weighted average of fixed-to-mobile interconnection charges for the 34 European SMP operators in the interconnection market is 13.73 €-cents. For the non-SMP operators the average fee is 16.30. If all mobile operators were considered, the average charge would be 14.70 (Figure 33). Values for each country are weighted average prices based on the number of subscribers and the termination rate of each operator.

Even if the SMP concept does not hold in Switzerland for the moment (although a decision of the competition Commission is expected), Figure 30 shows that the Swiss incumbent is positioned as a leader in the expensiveness of the charges applied.

When one examines Figure 31, which gives a much comparable image, it must be stated that the mobile telephony operators active in the Swiss market demand prices which are among the highest. No evolution took place between 2003 and 2004. With a weighted interconnection charge in 2004 of 22.72 €-cents, Switzerland is above the weighted European average by 53.9%. In the European comparison, there is no country in which charges are higher in 2004. Ten out of twenty-six countries are below the European average; the cheapest price is charged in Cyprus (3.1 €-cents).

Figure 30

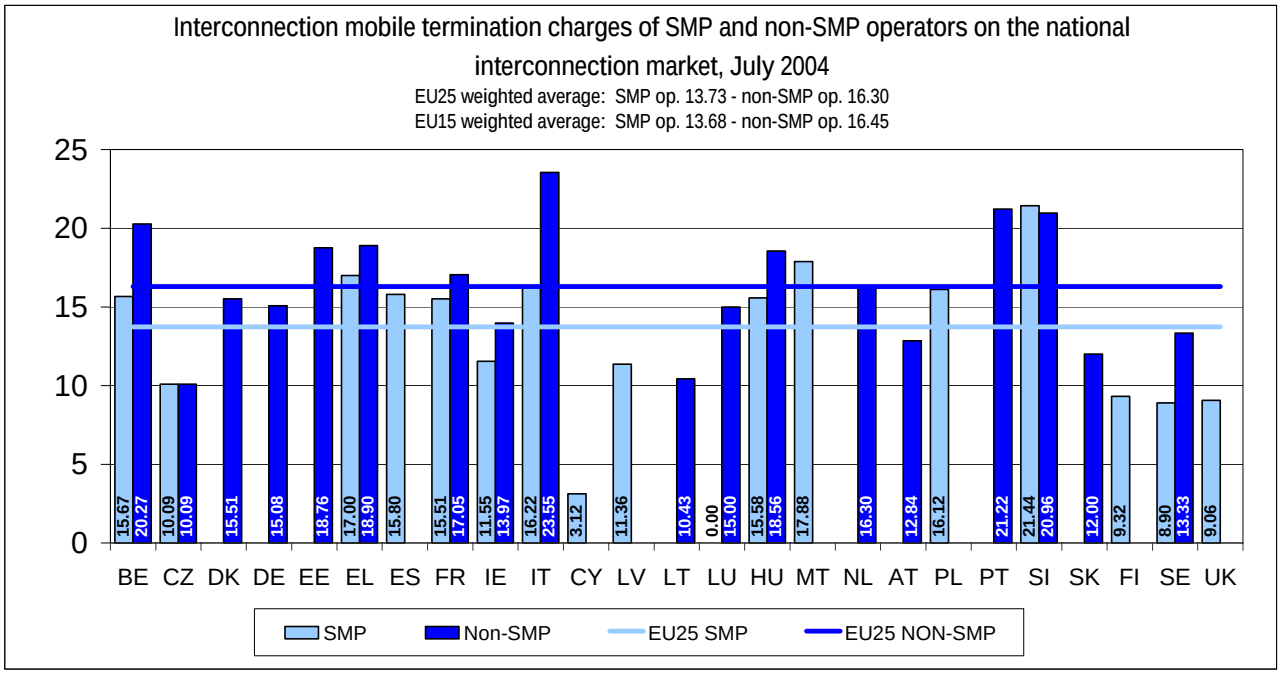
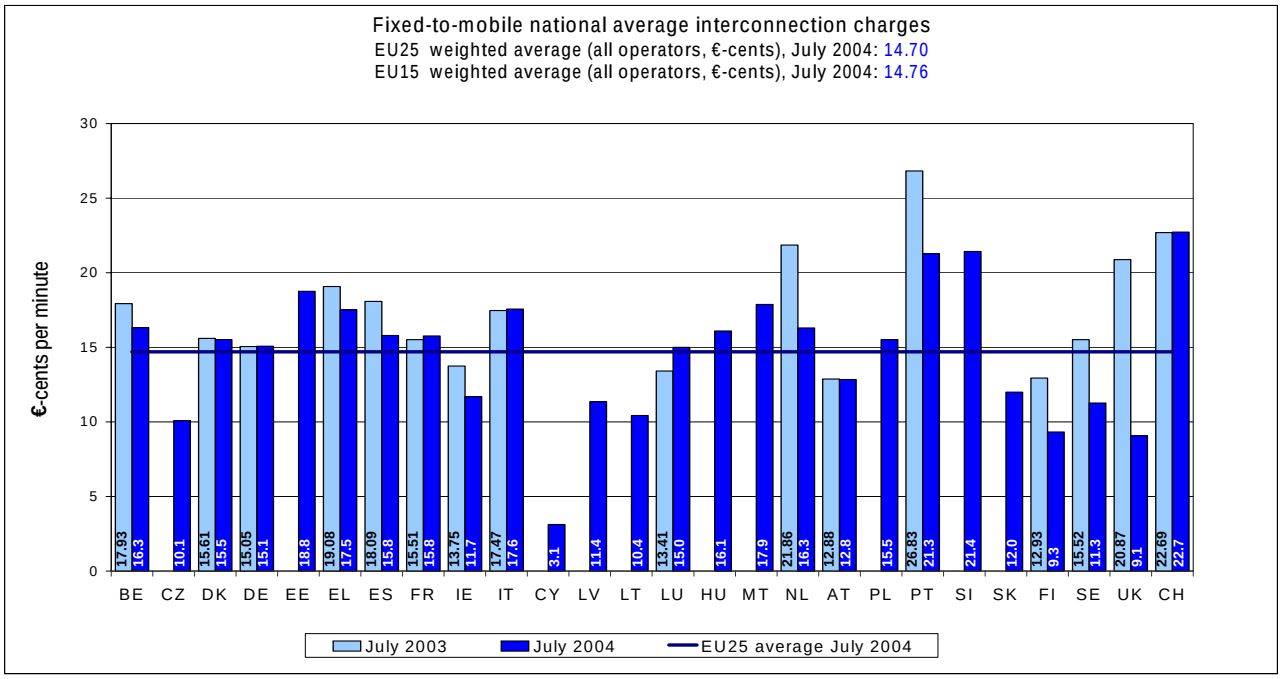


Figure 31



The following chart (Figure 32) shows the trend in the weighted average fixed-to-mobile interconnection fees for SMP and non SMP mobile operators in the EU15 between July 2001 and July 2004.

The 2004 exchange rates have been applied to the non euro-zone countries for previous years. Figures for 2001 for non-SMP operators are not available.

Last year there was a major reduction in the average termination rate for SMP operators only, while the average rate for non-designated operators remained stable. The major development in the last 12 months is that fees cuts have affected both types of operators.

The average termination rate for SMP operators has decreased by 14%, while the reduction for the non SMP operators was 13%.

The increase in the number of SMP designated operators signalled in the last report has continued and. EU15 SMP operators now cover 62% of subscribers, against 45% in 2003 and 41% in 2002.

Despite the continuing decline in the interconnection charges, their level remains on average more than 8 times higher than the average fixed-to-fixed interconnection charges (double transit). Last year termination rates of SMP operators were 9 times higher than the fixed termination rates.

In the case of Switzerland, one can easily see that the prices applied are much higher than the EU weighted averages in comparison with either SMP or non-SMP.

Figure 32

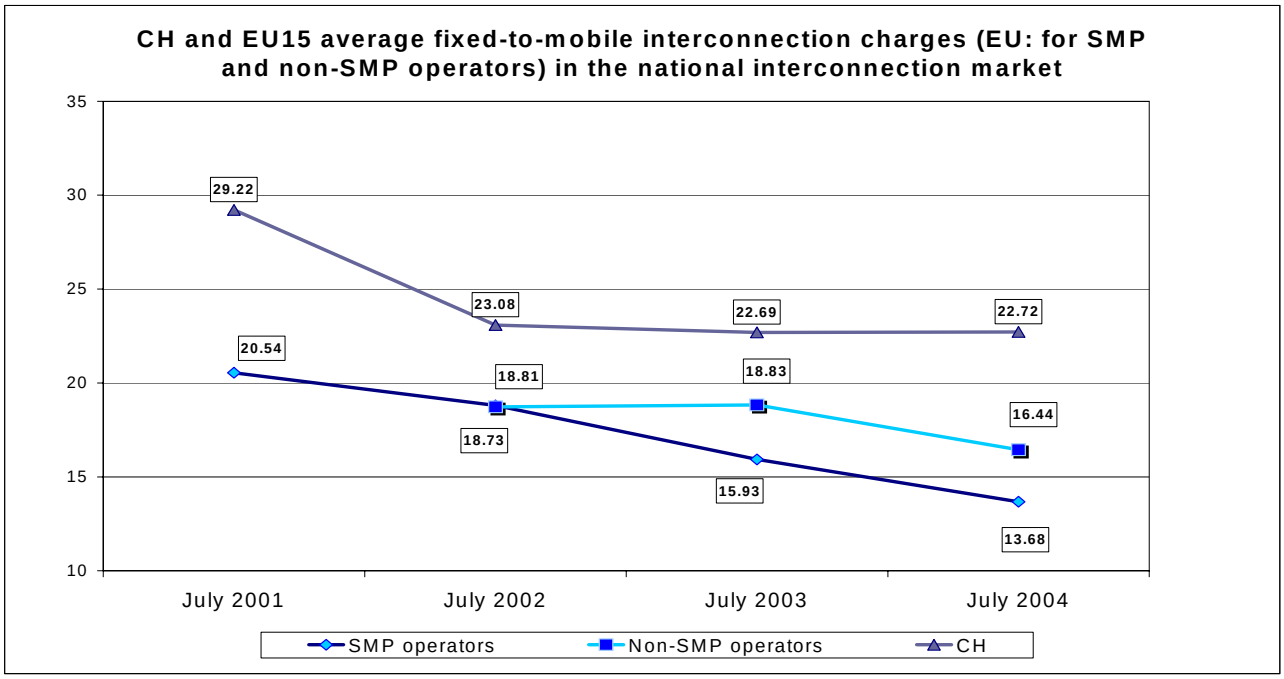
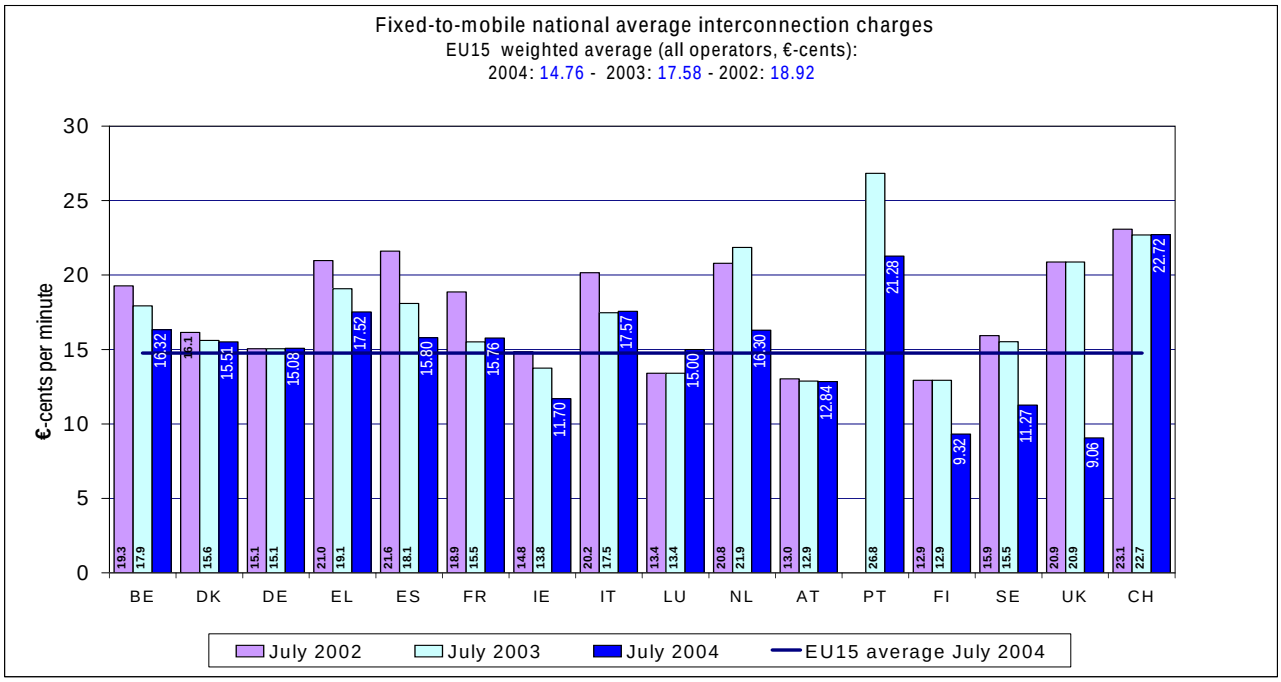


Figure 33 shows the average national mobile termination charge in the EU15 for the last three years. At EU15 level there has been a 22% reduction. The most significant cuts have occurred in the United Kingdom, Sweden, Finland (at the retail level) and the Netherlands. Termination charges have decreased in all Member States except for France, Italy and Luxembourg, where prices have increased, and Germany and Austria, where prices remained stable. In Switzerland, the insignificant increase between 2003 and 2004 is due to changes in the operator's market shares. In fact, the charges stayed unchanged.

Figure 33

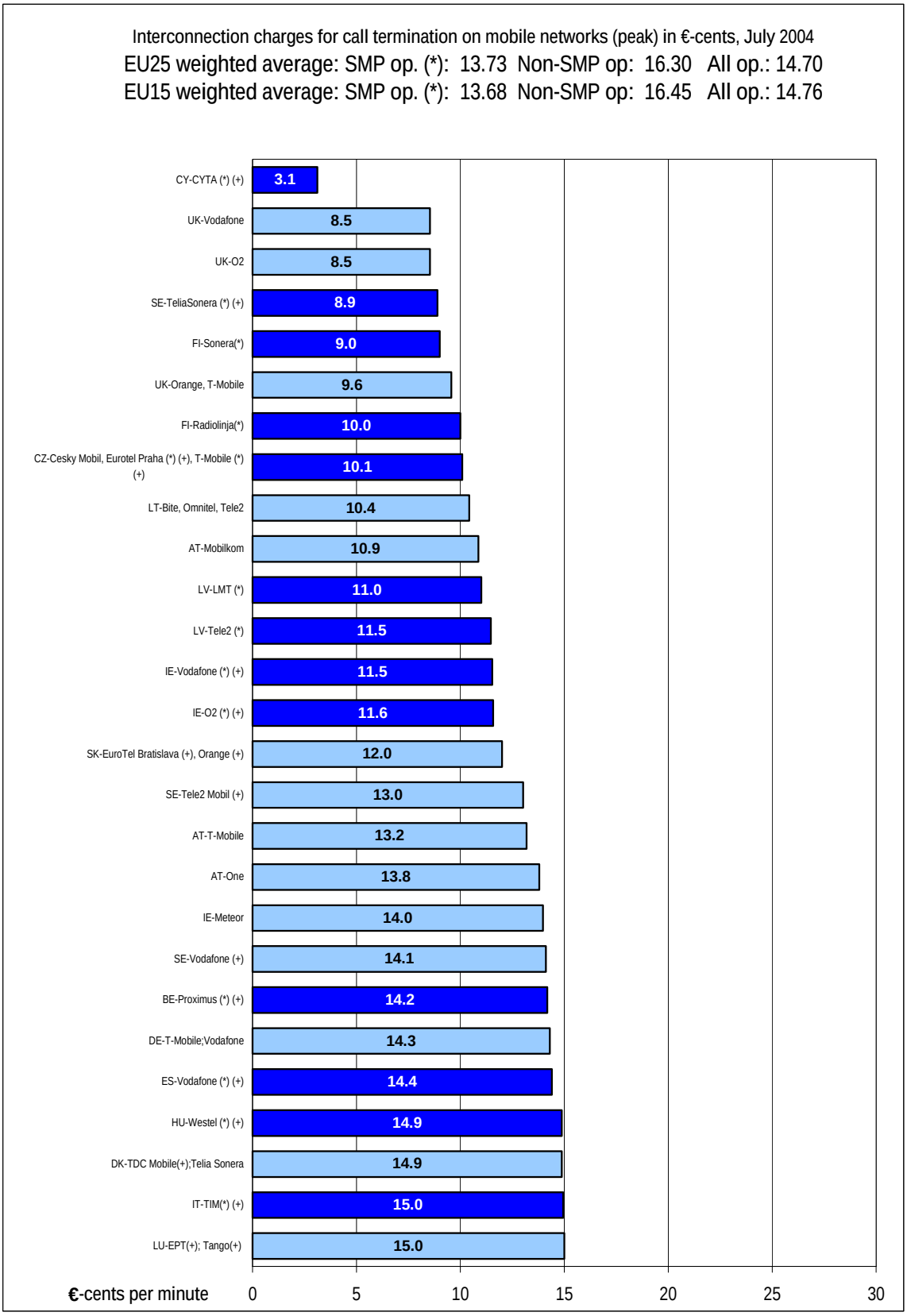


Figures for Denmark, Sweden and United Kingdom for 2003 have been recalculated using the 2004 exchange rates.

Source for Switzerland: Swisscom Price Manual up to and including Version 6.3.
Note: The price has been weighted using the respective market shares of the three mobile telephony operators (Swisscom, Sunrise, Orange) at the end of the first half of the years 2002, 2003 and 2004.

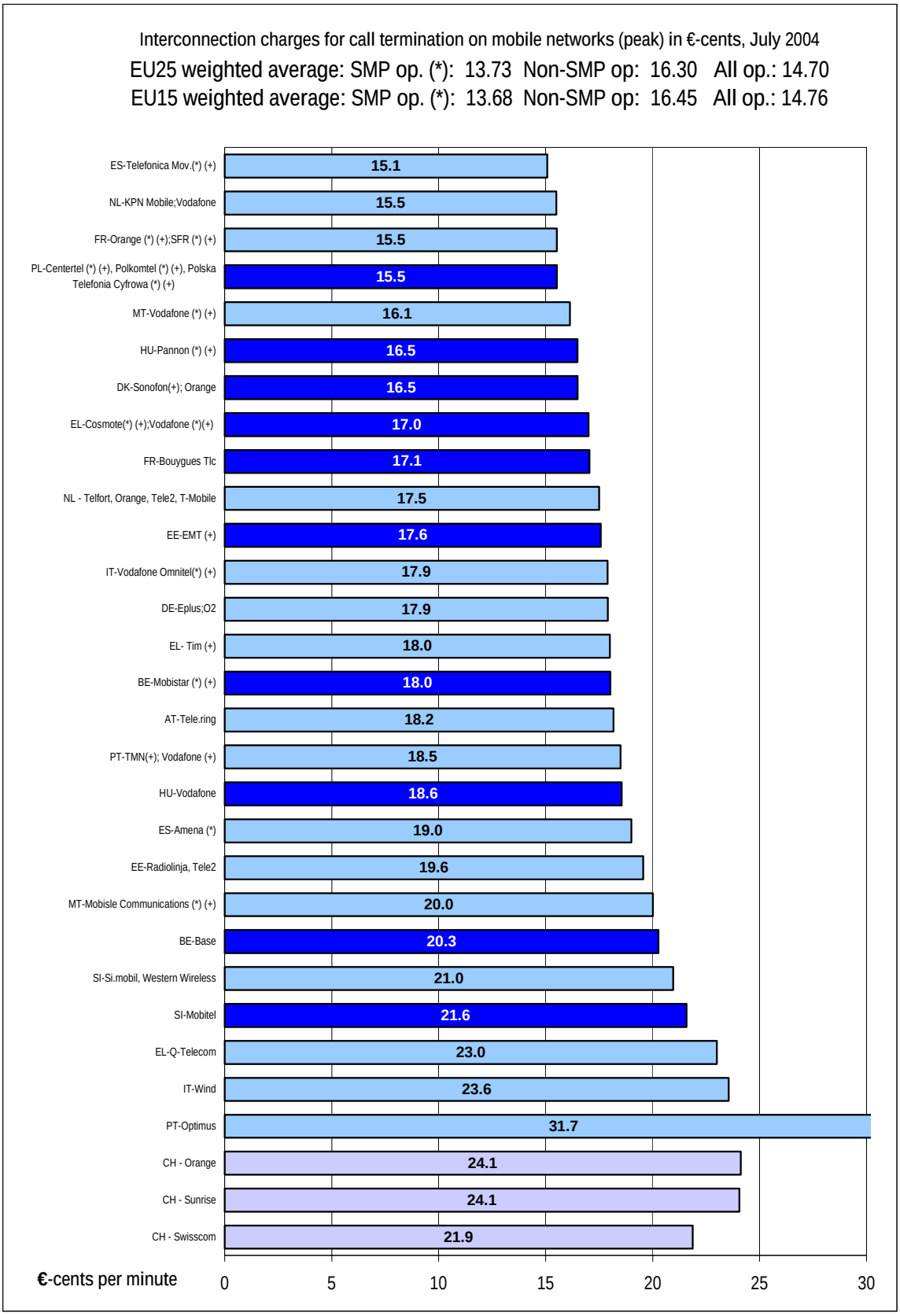
The following charts show the individual fixed-to-mobile interconnection charges for 75 (78 with Switzerland) mobile operators in the EU. As can be seen, the inclusion of operators from the new Member States has resulted in a wider array of termination fees than at EU15 level. This has not meant, however, a huge increase in the differential of termination fees. In Cyprus charges are as cheap as 3.1 € cents, whereas the most expensive fee is found in Portugal (31.7 € cents). If these two cases are excluded, the differential of the most expensive termination fee from the cheapest expressed as a percentage of the cheapest fee is 178%. Last year, at EU15 level, this figure was 170%. Apart from Cyprus, the Czech Republic has the cheapest mobile termination rates of the new Member States, while Slovenia has the most expensive.

Figure 34



Legend:
(*) SMP operators in the national interconnection market
(+) SMP operators in the national mobile market

Figure 35



Legend:
(*) SMP operators in the national interconnection market
(+) SMP operators in the national mobile market

Figures for the Netherlands, Ireland and Lithuania are not strictly comparable with the others since they represent an average peak/off-peak rate.
Czech Republic: Prices since 1 April 2004
Germany: Data from Cullen International Cross Country Analysis (June 2004, Table 34, Page 180)

Estonia: 2.75 EEK/min (17.58 €cents) if call volume is 3 or over 3 million minutes per month and 2.85 EEK/min (18.21 €cents) if call volume is less than 3 million minutes per month.
Greece: Minimum duration 30 seconds.
Spain: On 7 October 2004 the NRA approved a new set of interconnection tariffs to be applied since 31 October 2004. (16.06 €cents/min. for Amena, 12.88 €cents/min. for Vodafone and 13.26 €cents/min. for Telefonica).
France: Mainland. Call termination tariffs have decreased by 12.5% (Orange France and SFR) and by 15.6% (Bouygues) on 1 January 2004 in accordance with the ART basket. The price for a 3 minute communication at peak rate shows an artificial 3% increase due to the withdrawal of the free call time (40 seconds) that took place on 1 January 2004.
Ireland: All rates based on average MT tariffs. O2 and Vodafone to implement further reduction in September 04
Italy: TIM has adopted, for termination price, a flat rate (14,95 €cent/m) - no call set up at interconnection. Vodafone has adopted a peak/off peak rate: 17,89 €cent/m peak and 12,13 €cent/m off peak - no call set up at interconnection. WIND has adopted a peak/off peak rate: 23.55 is the peak tariff per minute - no call set-up at interconnection
Hungary: Prices for T-Mobile and Pannon applicable since 15/7/04
Austria: SMP-status according to the old framework
Poland: URTiP decision on SMP designation in the mobile termination market has been appealed by operators.
Finland: There are no fixed to mobile termination charges in Finland. In the case of a call from a fixed network to a mobile network, local operators determine the local network charges and mobile operators determine the mobile call charges. The fixed to mobile call charges in Finland are retail charges, not interconnection charges: retail rate for local access by the local operator and retail rate for the mobile segment of the call by the mobile operator. Both fixed and mobile operators determine the charges for their own segments. Proposed legislation in the Parliament could change the system by introducing regulation on fixed to mobile termination.
Sweden: SMP decision and remedies have not yet entered into force, as they have been challenged before the Administrative Court.

Source for Switzerland: Swisscom Price Manual up to and including Version 6.3.

4.3. LEASED LINES INTERCONNECTION CHARGES

This section shows the monthly rental and the one-off charges for short-distance leased lines (local ends, excluding VAT), up to 2 and 5 km, provided by the incumbent operator to other interconnected operators.

The distance refers to the radial distance between the customer local end leased line and the point of interconnection.

It should be noted that in some cases data include the handover costs, while in other cases these costs are excluded.

National Regulatory Authorities have provided these figures through the questionnaire for the 10th Implementation Report

Data on one-off connection price are taken from the draft Commission Recommendation of on the provision of leased lines in the European Union.

Figures indicate the position in August 2004.

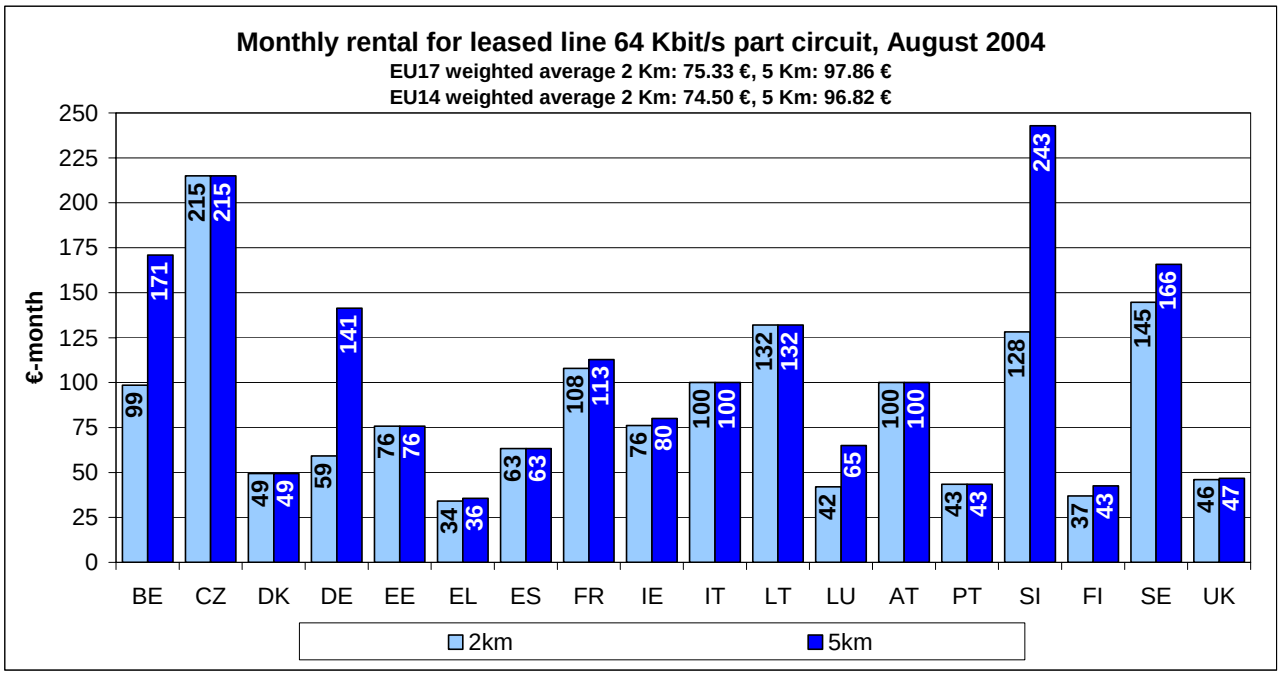
In Hungary the price of the leased line interconnection in the termination segment is not regulated.

In Finland SMP operator charges differ. Leased line prices are averages based on charges of TeliaSonera, Elisa, Oulun Puhelin, Kkkolan Puhelin and Kymen Puhelin, the latter three operators being part of the Finnet group.

Note that in Switzerland, Swisscom negotiates prices on a case-by-case basis with its clients. In the absence of official data, it is therefore not possible to include Switzerland in Figures 36 to 41.

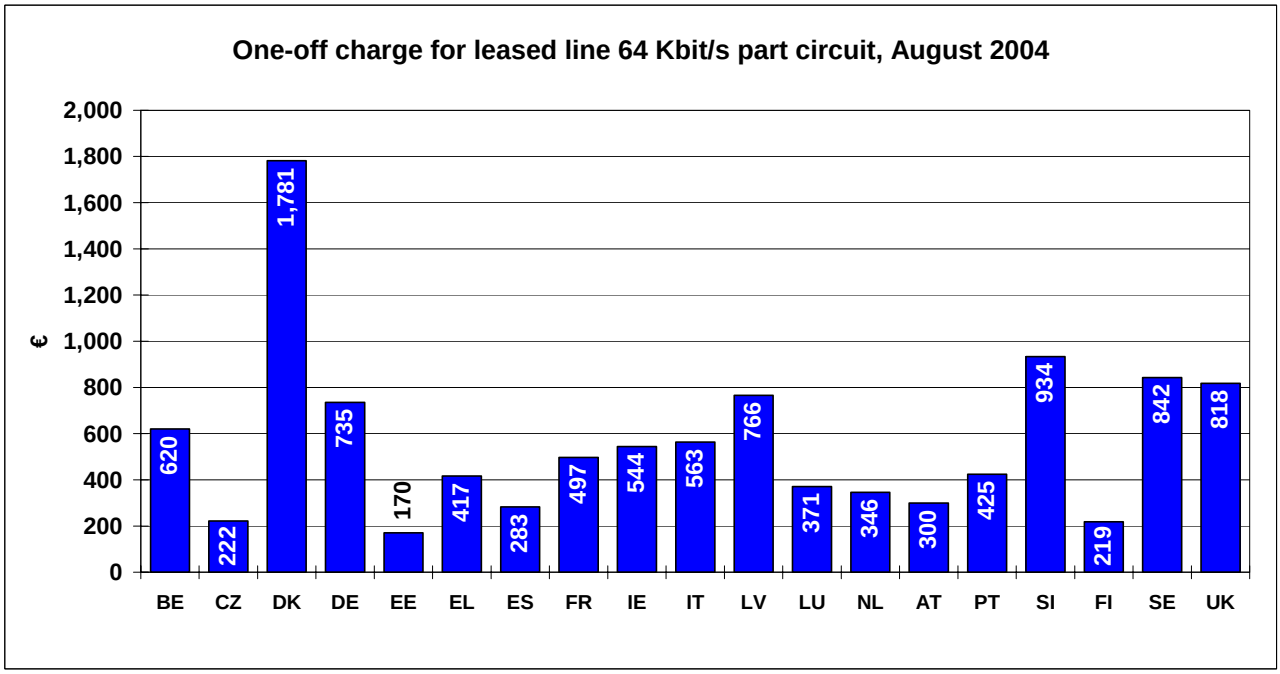
4.3.1. 64 Kbit/s part circuit

Figure 36



Czech Republic: Individual price
Latvia: IC circuits not offered
Lithuania: The price does not depend on the length of the line
The Netherlands: Data for local access is not available. The price for a regional service (~25 Km) is € 140.
Slovakia: 64 Kb/s IC circuits not available
Cyprus, Hungary, Malta, Poland: Data not available

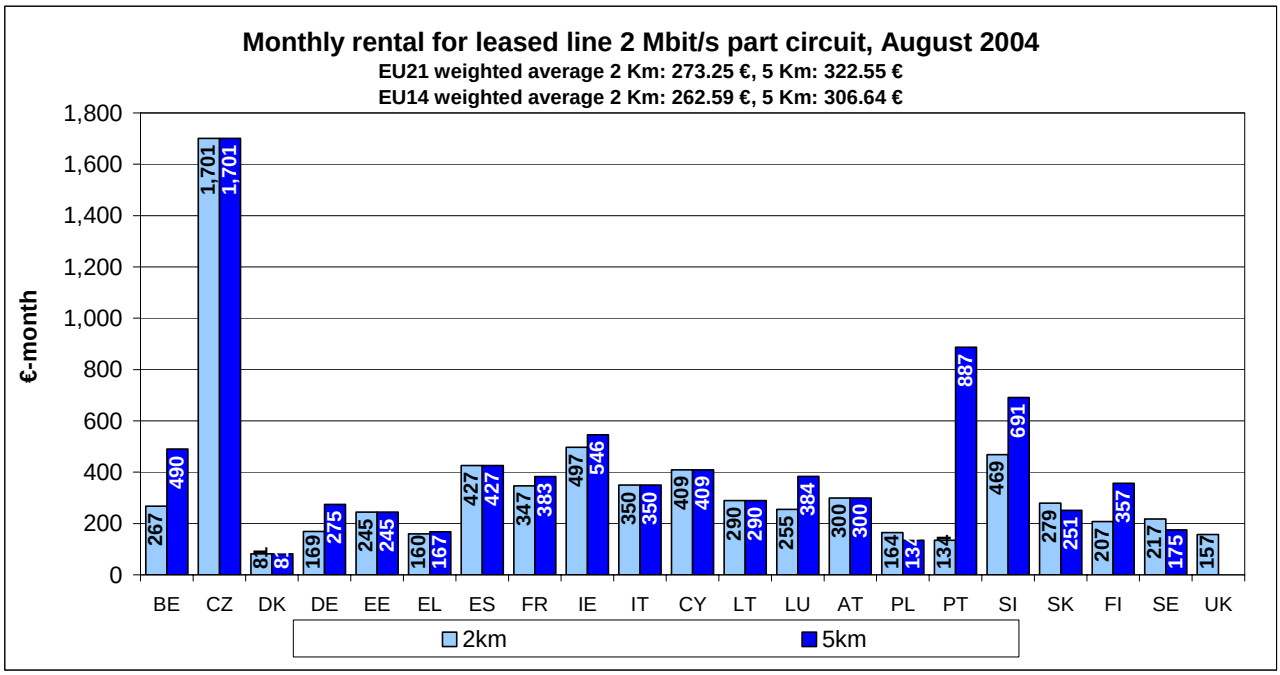
Figure 37



Denmark: Weighted average of the one-off connection costs
Slovakia: 64 Kb/s IC circuits not available
Cyprus, Lithuania, Hungary, Malta, Poland: No data available

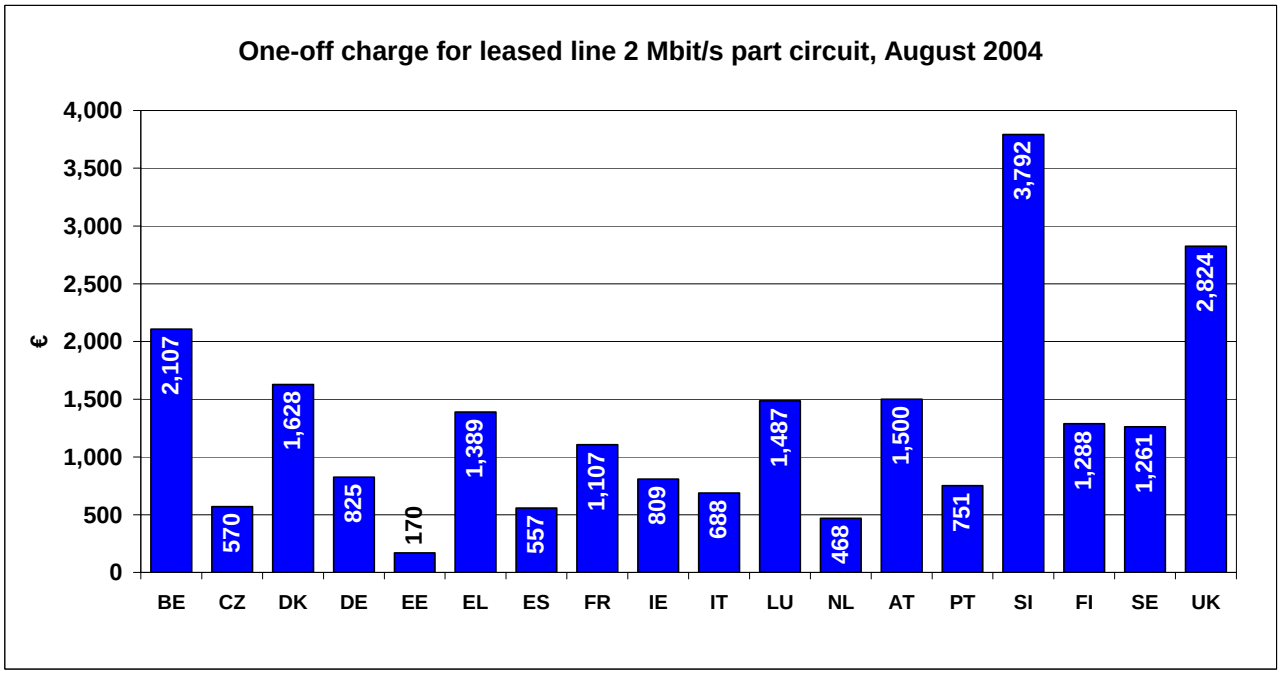
4.3.2. 2 Mbit/s part circuit

Figure 38



Hungary, Malta: Data not available
Latvia: IC circuits not offered
Lithuania: The price does not depend on the length of the line
The Netherlands: Price per local access (not per Km)

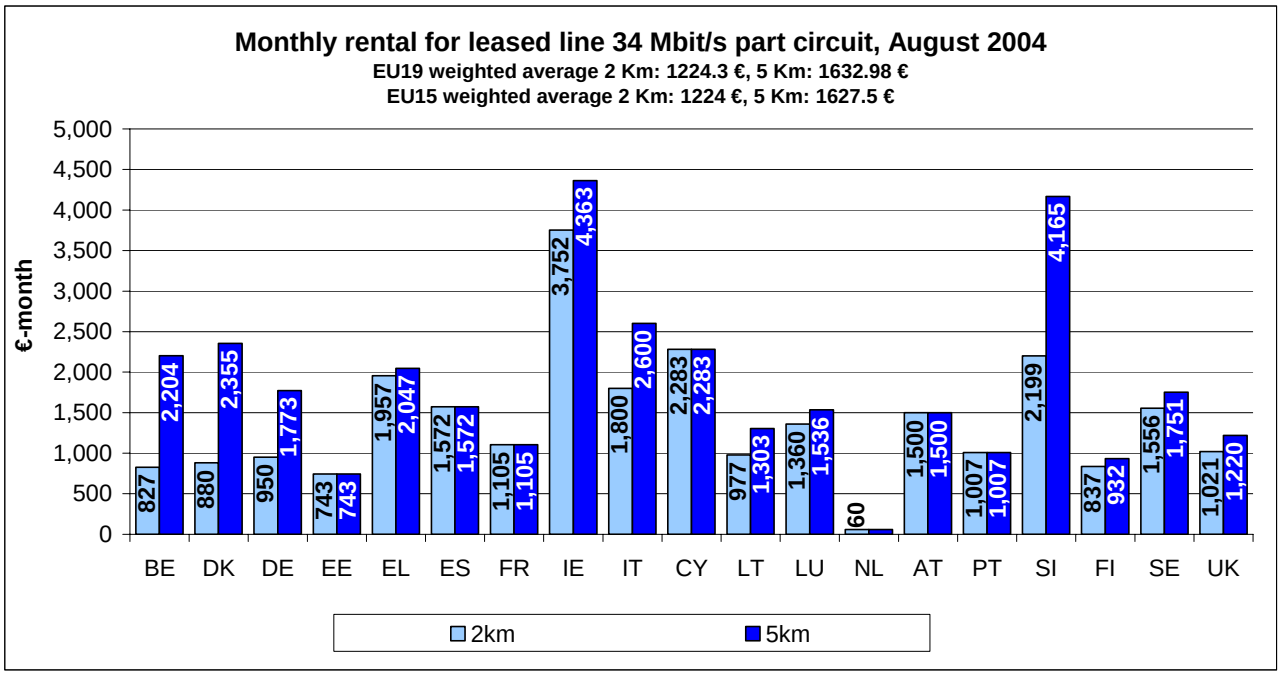
Figure 39



Denmark: Weighted average of the one-off connection costs
Latvia: IC circuits not offered
Cyprus, Lithuania, Hungary, Malta, Poland, Slovakia: Data not available

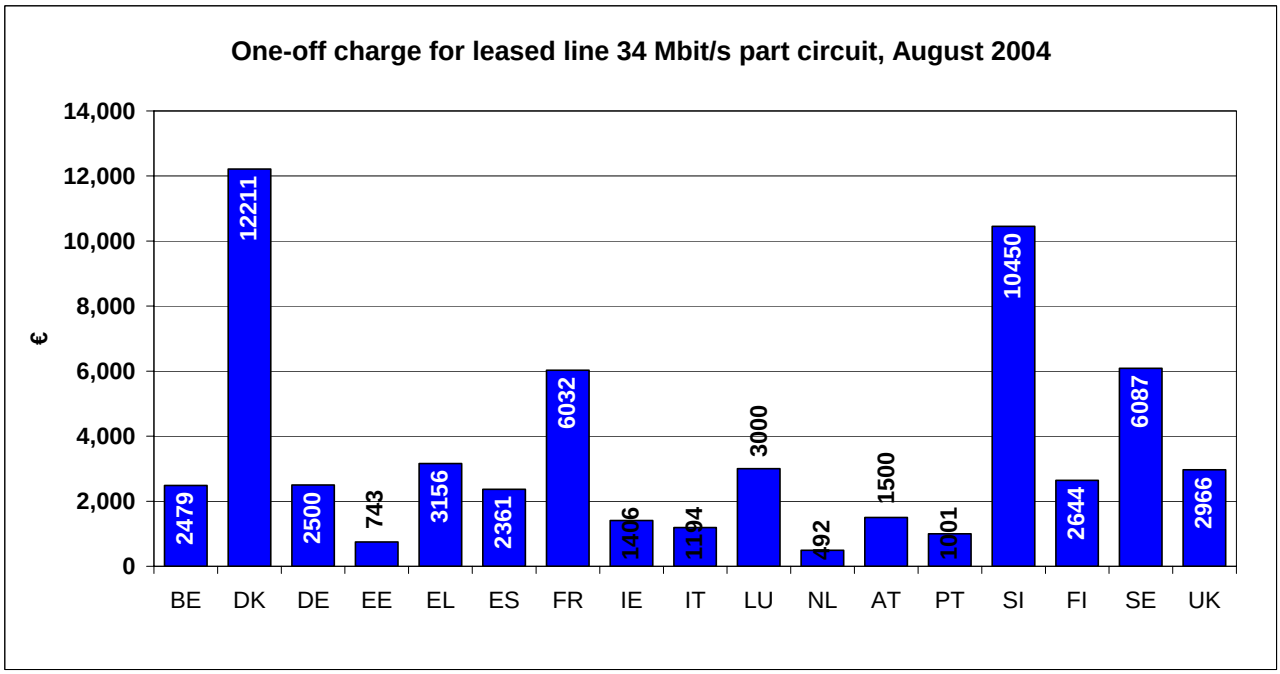
4.3.3. 34 Mbit/s part circuit

Figure 40



Czech Republic: Individual price
Latvia: IC circuits not offered
The Netherlands: Price excluding (local) fibre access. Fibre access charge is not regulated. Price in the Netherlands is an average of 2 times 34 Mbit/s in a 155 Mbit/s fibre access service and a 155 Mbit/s broadband access group.
Hungary, Malta, Poland: Data not available
Slovakia: 34 Mb/s IC circuits not available
There is no 34 Mbit/s standard price offer in France

Figure 41



Denmark: Weighted average of the one-off connection costs
There is no 34 Mbit/s standard price offer in France
Price in the Netherlands is an average of 2 times 34 Mbit/s in a 155 Mbit/s fibre access service and a 155 Mbit/s broadband access group.
Czech Republic, Cyprus, Lithuania, Hungary, Malta, Poland: Data not available

5 MOBILE MARKET

5.1. 2G MOBILE PENETRATION

This section provides information on the number of mobile subscribers and the penetration rate for second generation mobile services (DCS-GSM) in each Member State. The growth in the penetration rate since August 2003 for the EU15 countries and December 2003 for the New Member States is also shown.

Figures have been provided by the NRAs and by European Mobile Communications Report. The reference data, unless otherwise stated, is end of June 2004. Where available, data have been provided by the National Regulatory Authorities (NRAs). For those countries where NRAs did not have up to date information, figures are estimated from the "European Mobile Communications" database.

The EU average is a weighted average.

It should be noted that operators and regulators use different methods to count the number of subscribers. Some operators consider the total number of users that have made or received a call or sent an SMS in the last 9 or 6 months, whereas others only consider the active users of the last 3 months. This has an impact in the penetration rate, especially in small countries.

The table below indicates the source of the data and, where available, the definition of 'active subscriber' used in every Member State and in Switzerland.

Country	Source of data & reference date	Comments
Belgium	EMC estimates June 2004	IBPT data refer to active users in the last 6 months
Czech Republic	NRA 30/6/04	Data for active users in the past 6 months.
Denmark	NRA 30/6/04	Data for active users in the past 3 months.
Germany	NRA 30/6/04	
Estonia	NRA 30/6/04	
Greece	NRA 30/6/04	Breakdown by operator confidential
Spain	Ministry 30/6/04	Definition of active user varies between 13 and 6 months.
France	NRA 30/6/04	Data for active users in the past 3 months.
Ireland	NRA 30/6/04	
Italy	EMC estimates June 2004	Data for active users in the past 3 months.
Cyprus	NRA 30/6/04	Data for active users in the past 3 months.
Latvia	NRA 30/6/04	Data for active users in the past 3 months.
Lithuania	NRA 30/6/04	Data for all cards.
Luxembourg	EC services1/5/04	
Hungary	NRA 30/6/04	Data for active cards.
Malta	NRA 30/6/04	Data for active users in the past 3 months.
The Netherlands	EMC estimates June 2004	
Austria	EMC estimates June 2004	
Poland	EMC estimates June 2004	

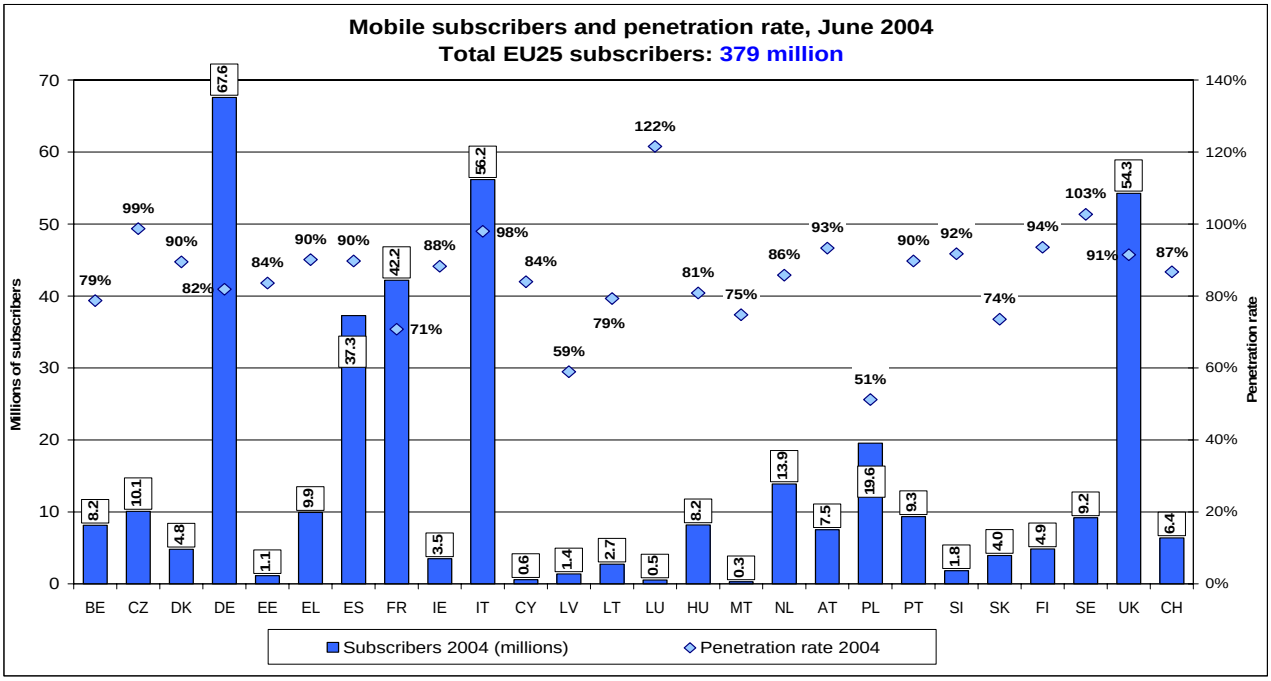
Portugal	NRA 30/6/04	Active users in the last 3 months
Slovenia	NRA 30/6/04	
Slovakia	EMC estimates June 2004	
Finland	NRA 30/6/04	
Sweden	NRA 30/6/04	Data for active users in the past 12 months and 6 months.
United Kingdom	EMC estimates June 2004	
Switzerland	Operators, NRA computation	

The following chart shows the absolute number of mobile subscribers in each Member State (columns) and the penetration rate (dots), measured as the number of subscribers per 100 population.

Figures for Czech Republic, Spain, Italy, Poland, Slovakia, Slovenia and Sweden include analogue subscribers.

In 2004, the mobile telephony penetration rate in Switzerland, at 87%, was equivalent to the weighted average for the European Union countries (EU15). Switzerland was in 14th position among EU25 countries. Four countries reported penetration rates above 95%: Italy (98%), Czech Republic (99%), Sweden (103%) and Luxembourg (122%). Latvia (59%) and Poland (51%) are the only countries which had not exceeded 70%. Measured in terms of consumers, the largest markets are in Germany, Italy and the United Kingdom. Together, the users in these three countries make up 47% of the subscribers counted in the member countries of the Union. Switzerland, with its 6.4 million users, naturally belongs to the group of countries characterised by a low volume of users in absolute terms.

Figure 42

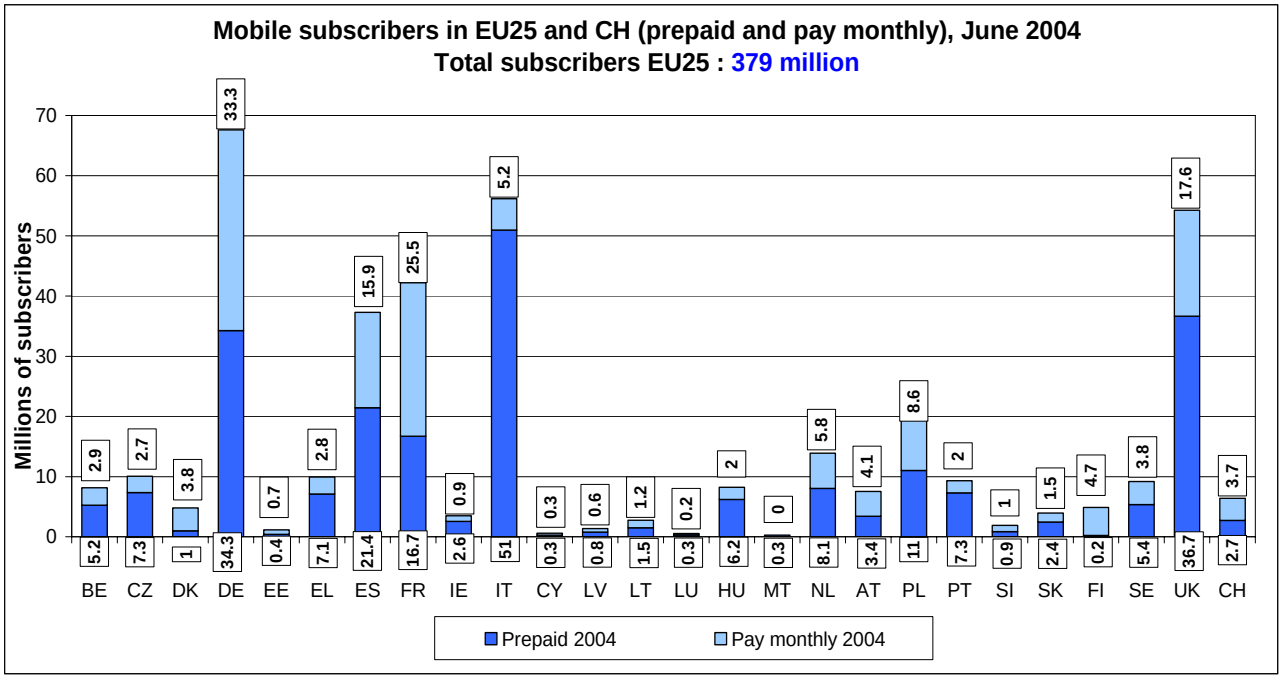


Denmark: Figures include pre-paid cards that have been active within the last 3 months. Inactive pre-paid cards are excluded.
Luxembourg: The penetration rate has been calculated on the basis of the national population only. If trans-national commuters were considered the penetration rate would be around 98%.
Cyprus: A second operator has recently started offering services. The number of subscribers in September has increased to 325 737 and the penetration rate is 89%.
Latvia: The number of subscribers in September has increased to 1 470 885 and the penetration rate is 62.7%.
Lithuania: Figures include all SIM cards. The number of active subscribers in the last 3 months is 2.58 million at the end of June and the corresponding penetration rate would be 74.5%.
Hungary: Data refer to all active cards. The number of active cards in the last 3 months was 7554000 million, i.e. a penetration rate of 74%.

Source for Switzerland: OFCOM Switzerland.

The following chart shows the number of subscribers and the split between post-paid and pre-paid subscribers. In Switzerland the proportion of post-paid and prepaid is similar to those of France and Austria for example. Customer preferences in the mentioned countries lean towards the postpaid system with a proportion of about 60% (precisely 58% in Switzerland).

Figure 43

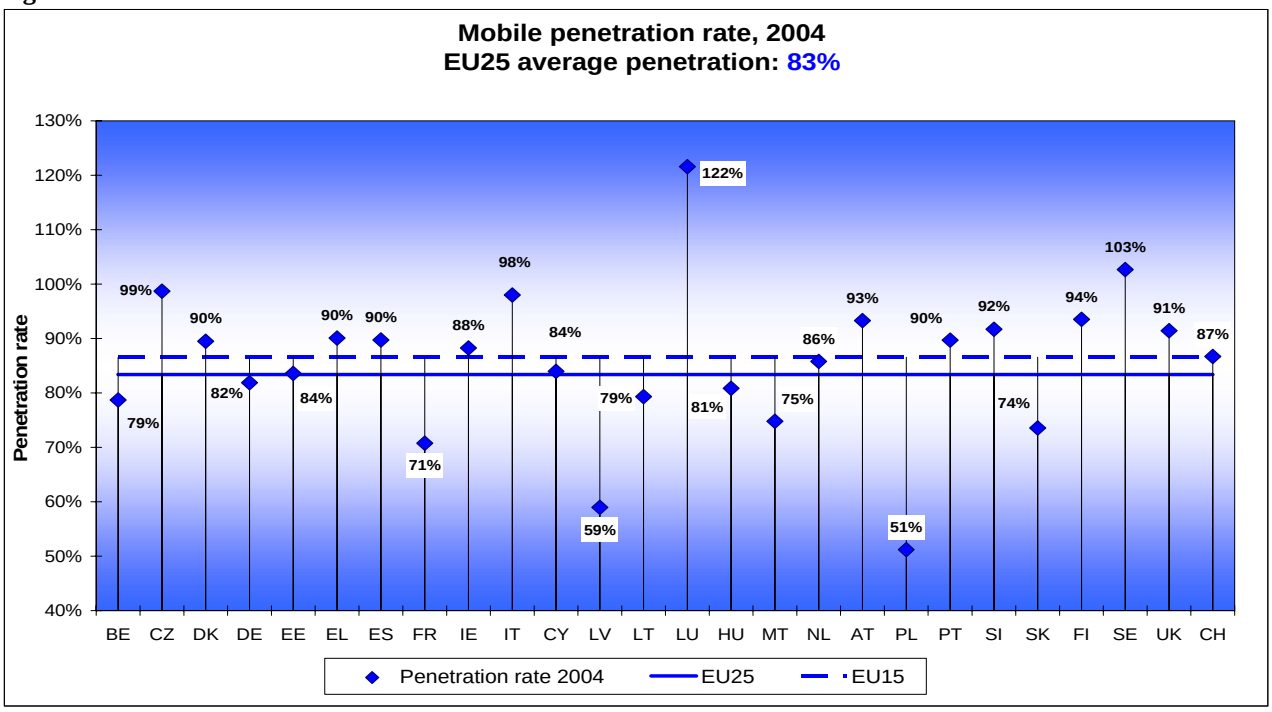


The breakdown of pre-paid/post-paid in Spain is an estimate based on EMC data.
Denmark: Figures include pre-paid cards that have been active within the last 3 months. Inactive pre-paid cards are excluded

Source for Switzerland: OFCOM Switzerland.

The mobile penetration rate in Switzerland was 87% in 2004 and corresponded to the weighted average of the old Member States. A comparable level was observed in the Netherlands and in Cyprus.

Figure 44



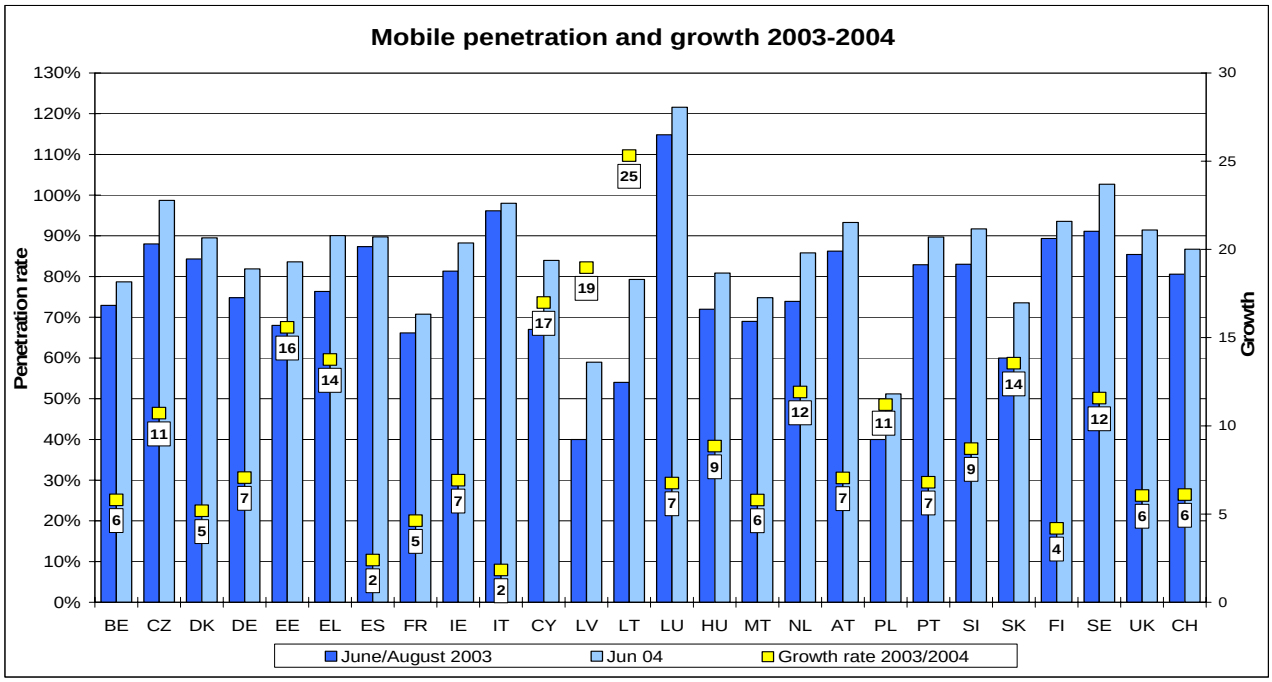
Denmark: Figures include pre-paid cards that have been active within the last 3 months. Inactive pre-paid cards are excluded.

Luxembourg: The penetration rate has been calculated on the basis of the national population only. If trans-national commuters were considered the penetration rate would be around 98%.
Cyprus: A second operator has recently started offering services. The number of subscribers in September has increased to 325 737 and the penetration rate is 89%.
Latvia: The number of subscribers in September has increased to 1 470 885 and the penetration rate is 62.7%.
Hungary: Data refer to all active cards. The number of active cards in the last 3 months was 7554000 million, i.e. a penetration rate of 74%.
Lithuania: Figures include all SIM cards. The number of active subscribers in the last 3 months is 2.58 million at the end of June and the corresponding penetration rate is 74.5%.

Source for Switzerland: OFCOM Switzerland.

Figure 45 displays the growth in mobile penetration expressed in percentage points. Data refer to June 2004 for all Member States, August 2003 for the EU15 countries (Source: 9th Implementation report and NRAs) and June 2003 for the new Member States (Source: 4th IBM Report on Monitoring of EU Candidate Countries (Telecommunications Services Sector). It is apparent that although the penetration rate for Switzerland is almost equivalent to the weighted European average (EU15), the rate of growth is higher, at 6.1% compared with 5.7% in Europe. Luxembourg has the highest penetration rate. The new Member States enjoy the highest growth rates.

Figure 45



Denmark penetration figures are not directly comparable due to a change in the definition of active pre-paid cards. The figure for 30/6/03 includes pre-paid cards that have been active within the past 6 months, while the figure for 30/6/04 includes pre-paid cards that have been active within the past 3 months.
Luxembourg: The penetration rate has been calculated on the basis of the national population only. If trans-national commuters were considered the penetration rate would be around 98% in 2004 and 92% in 2003.
Cyprus: A second operator has recently started offering services. The number of subscribers in September has increased to 325 737 and the penetration rate is 89%.
Latvia: The number of subscribers in September has increased to 1 470 885 and the penetration rate is 62.7%.
Lithuania: Figures include all SIM cards. The number of active subscribers in the last 3 months is 2.58 million at the end of June and the corresponding penetration rate is 74.5%.
Hungary: Data refer to all active cards. The number of active cards in the last 3 months was 7554000 million, i.e. a penetration rate of 74%.

Source for Switzerland: OFCOM Switzerland.

The next two figures show the evolution of the mobile telephony penetration rate in the Union countries and Switzerland. As can be seen, the progression of the curve for Switzerland matches almost perfectly the average progression of neighbouring countries (EU15).

The most marked difference, +2.8% in Switzerland's favour – still minimal – was related to the year 2000. In comparison with EU25 in 2004 Switzerland shows a leadership with a difference of +3.3%.

Figure 46

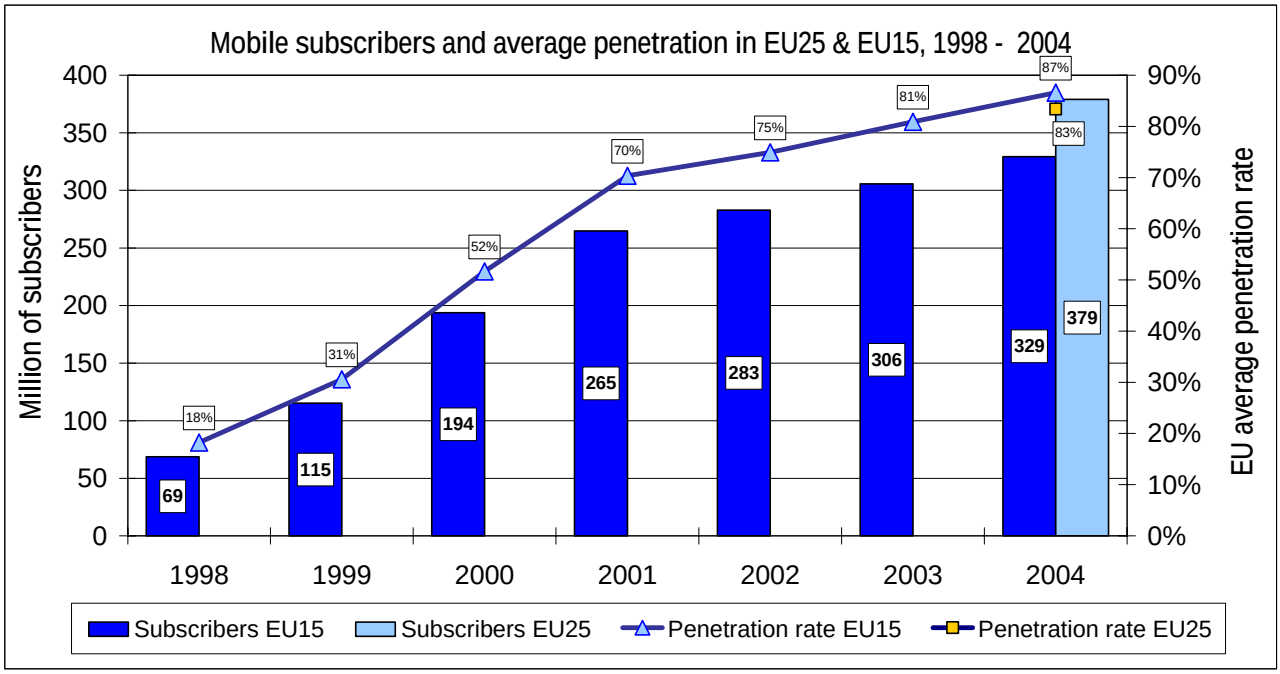
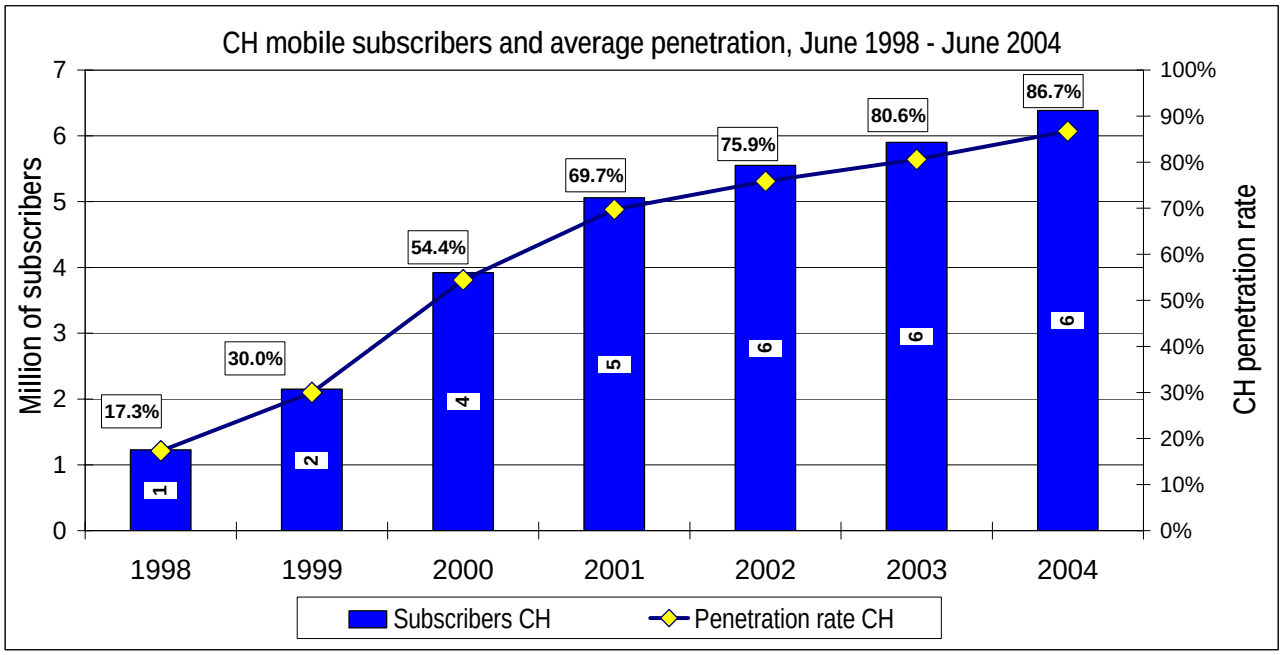


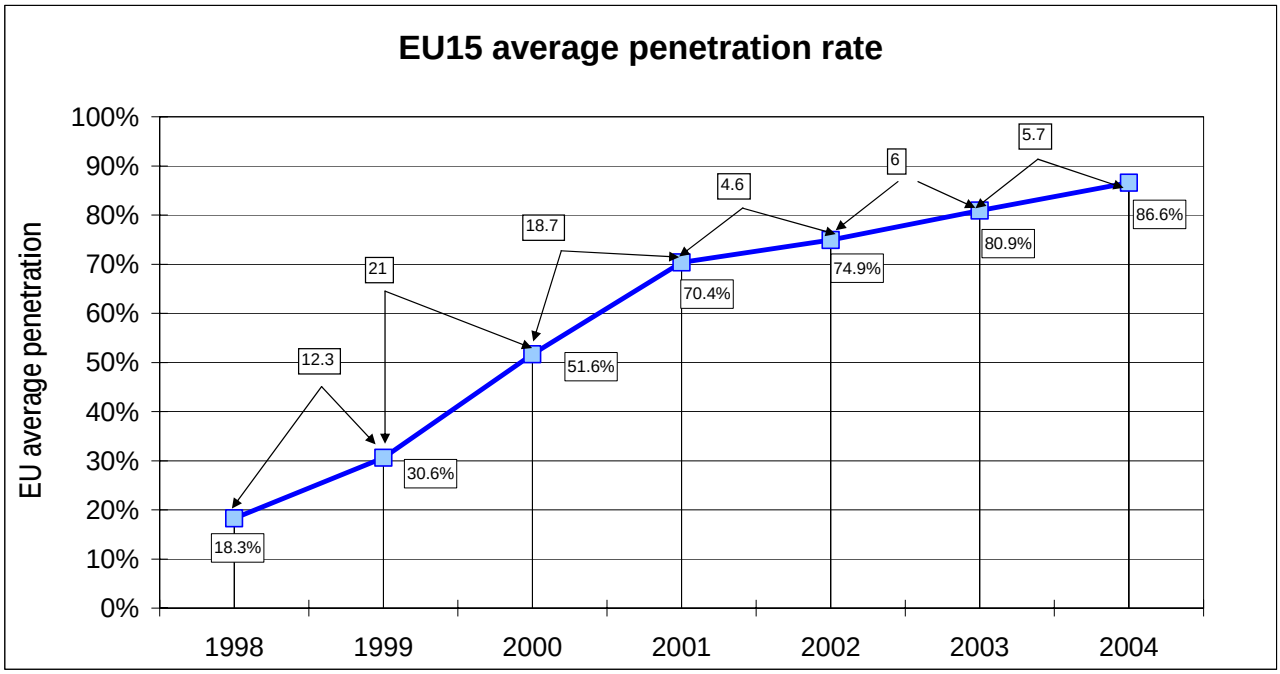
Figure 46a



Source for Switzerland: OFCOM Switzerland.

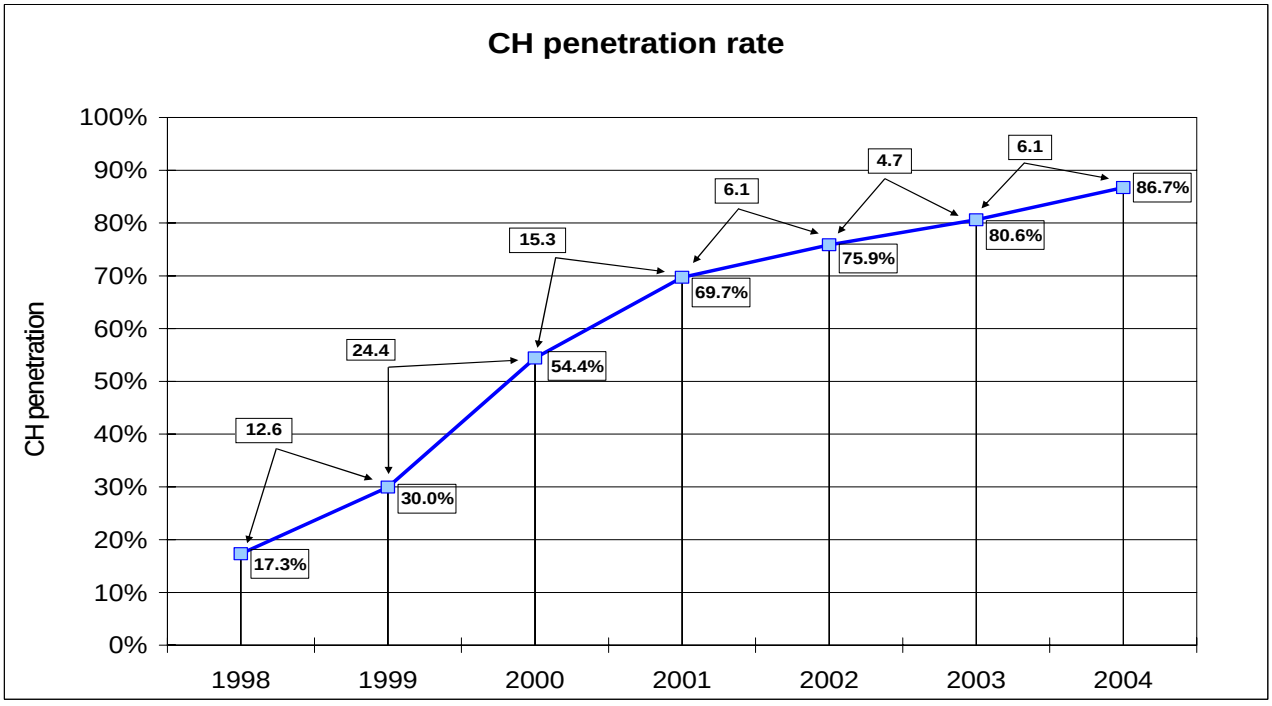
Figures 47 and 47a display the growth rate observed annually from 1998 to date. Following developments in Europe, the increase in the mobile penetration rate in Switzerland was strong primarily in the first three years (rate varying between 13 and 24%). Since 2001, development has slowed down markedly, indicating that a degree of saturation of the market is approaching. Nonetheless, if one recalls Luxembourg's exceptional penetration rate, there is still some potential for growth in Switzerland.

Figure 47



EU average is a weighted average.

Figure 47a



Source for Switzerland: OFCOM Switzerland.

5.2. PLAYERS IN THE MOBILE MARKET

This section shows the number of mobile licences granted in each Member State for the provision of analogue, GSM 900, DCS 1800 and UMTS services.

The data on the number of licensed operators have been provided by the national regulatory authorities and indicate the position in July 2004.

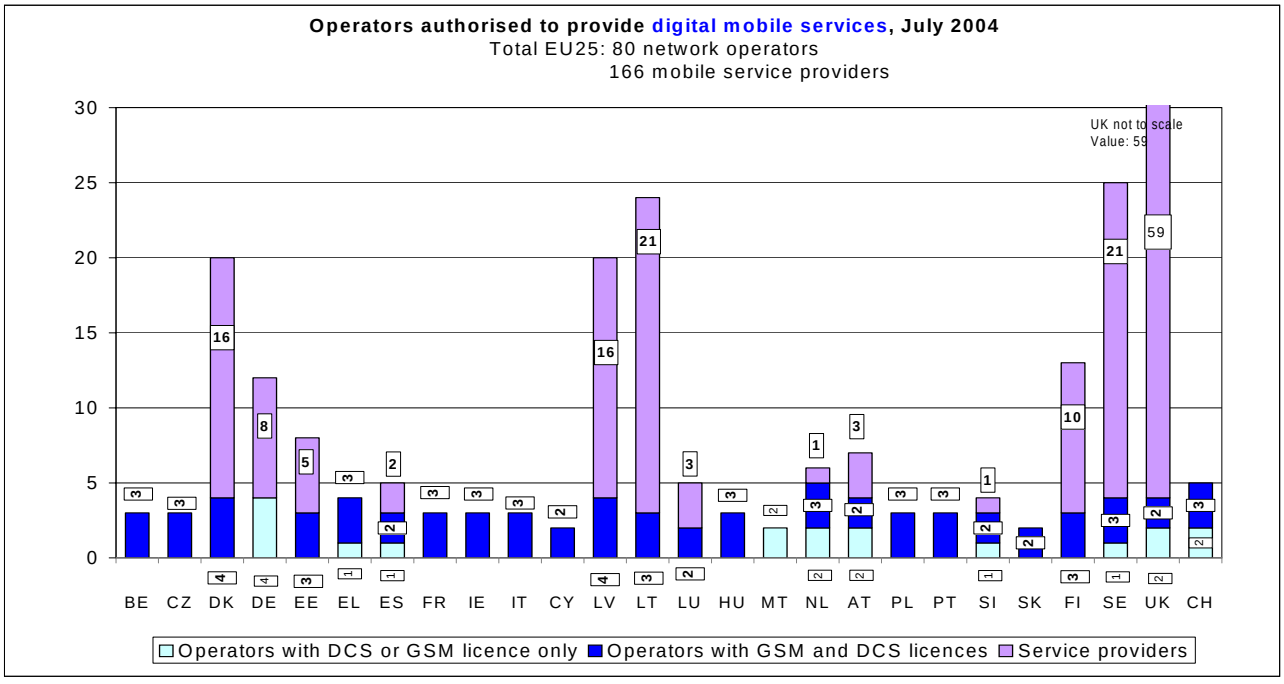
The following chart shows the number of operators licensed to provide digital mobile services (second-generation). The number of operators indicates the real magnitude of the choice of operators for customers of digital mobile services, since very often operators have licences for both GSM 900 and DCS 1800. Mobile network operators have been identified as having only GSM 900 or only DCS 1800 frequencies, or both (in which case they have usually been granted a GSM 900 licence which has subsequently been extended to the DCS 1800 band).

Information on mobile service providers has been included where available (without distinction between local and national coverage). Mobile service providers are defined as entities authorised to offer mobile service under their own brand name (dealing with marketing, billing, etc.), using a third party's mobile network. There are 3 analogue licences for mobile services still active in EU: in Spain, Italy and Sweden. These are scheduled to be phased-out on the 1st January 2007 for Sweden and Spain and at the end of 2005 for Italy.

In Switzerland, four providers are operationally active in this market. On one side are Swisscom Mobile, Sunrise and Orange which all operate a network, and on the other, Tele2 which is active as a telecommunication services provider. It is also worth mentioning that in February 2004 the Communications Commission (ComCom) granted two additional licences in the 1800 MHz frequency range to the companies In&Phone and Tele2. Now, Tele2 operates its own regional network (in Zurich).

In all the countries considered, the number of operators with frequencies available and operating a network varies between two (Luxembourg, Cyprus, Lithuania, Malta and Slovakia) and five (the Netherlands).

Figure 48



- Figures for Finland do not include 1 local GSM operator belonging to the Finnet Group (Alands).
- In France there are 3 mobile operators and 1 MVNO offering services in the metropolis territory. The figure does not include 11 operators in the overseas departments (Département de la Réunion, Antilles Françaises, Guyane; Île de Saint Martin et Saint Barthélémy).

Source for Switzerland: OFCOM Switzerland.

5.3. 3G PLAYERS

This section shows the number of mobile licences granted in each Member State for the provision of UMTS services

The great majority of licences have been granted to players active in the second generation market, and 14 licences have been granted to new entrants. In the New Member States some countries have not yet awarded the 3G licenses.

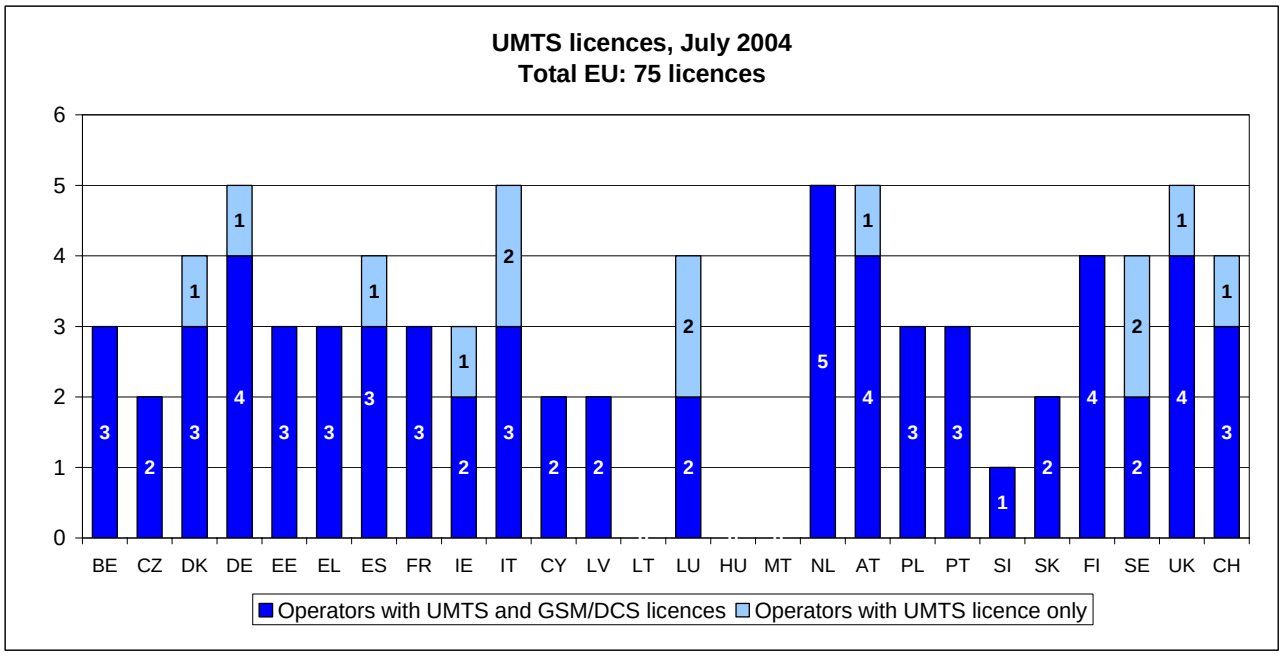
In 2003, 3G services were available in Italy, United Kingdom, Austria and Sweden. 2004 has witnessed the launch of 3G services in more countries, mostly in the second half of the year. Many of these launches are tests or pre-commercial, and are being used by 3G operators as a way to prepare for the actual commercial launch.

In most cases 3G networks have limited coverage, mostly concentrated in the largest cities, and population coverage ranges from around 80% in the United Kingdom and Sweden to less than 10% in those countries were services started to be offered at the end of year.

In many cases data-cards for laptops and handsets are available, although the offer of data cards exceeds that of handsets.

In December 2000, the Communications Commission awarded four UMTS licences to Swisscom Mobile, Orange, TDC Suisse (cf. Sunrise) and, finally, 3G Mobile, which is a new entrant. In all the countries under consideration, the number of licences awarded varies between one (Slovenia) and five (Germany, Italy, the Netherlands, Austria and United Kingdom).

Figure 49



Source for Switzerland: OFCOM Switzerland.

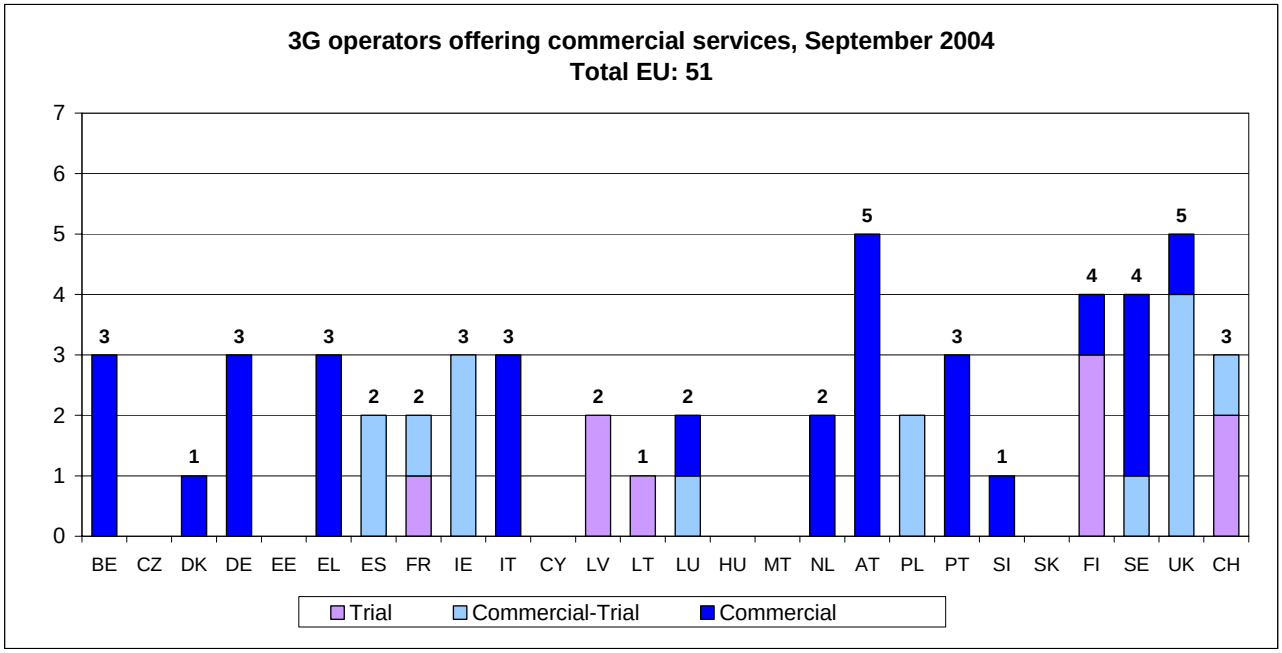
Figure 50 shows the status of the launch of 3G services (trial and commercial). The following categories are presented:

- Trial: Tests with a closed group of selected users
- Commercial-trial: Trials open to any users with special price packages.
- Commercial: Fully commercial services open to any users at standard tariffs.

Services can be provided by means of data-cards or handsets or both together.

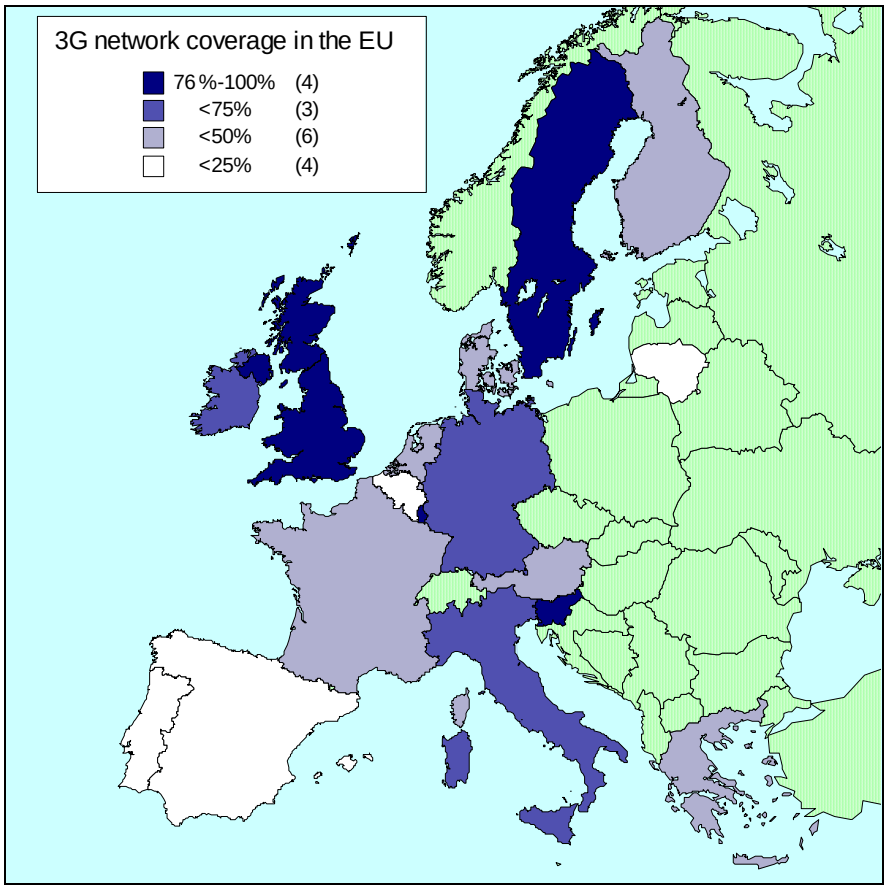
On the chosen date (September 2004), none of the licensees was offering UMTS fully commercial services to Swiss consumers. Swisscom Mobile and TDC Suisse (cf. Sunrise) accomplished commercial trials. Before the end of 2004 Swiss UMTS operators were obliged to achieve 50% of 3G network population coverage in the country. Three companies satisfied the conditions at the end of 2004 (Swisscom, Sunrise and Orange).

Figure 50



Source for Switzerland: OFCOM Switzerland.

Figure 51



Values indicate the maximum expected coverage announced by any national operator at the end of each year unless otherwise stated. Network coverage by other operators may differ.
Belgium, the Netherlands and Portugal: Source EC.
Switzerland was not included in the chart but had at least 50% population coverage at the end of 2004.

5.4. 2G OPERATORS' MARKET SHARES

The following charts show the market shares based on subscribers of the leading operator and the main competitors in the second generation mobile market.

Operators' market shares have been calculated for the overall mobile market (including analogue, DCS 1800 and GSM 900 subscribers). There are analogue subscribers in Italy, Poland, Slovenia, Slovakia and Sweden.

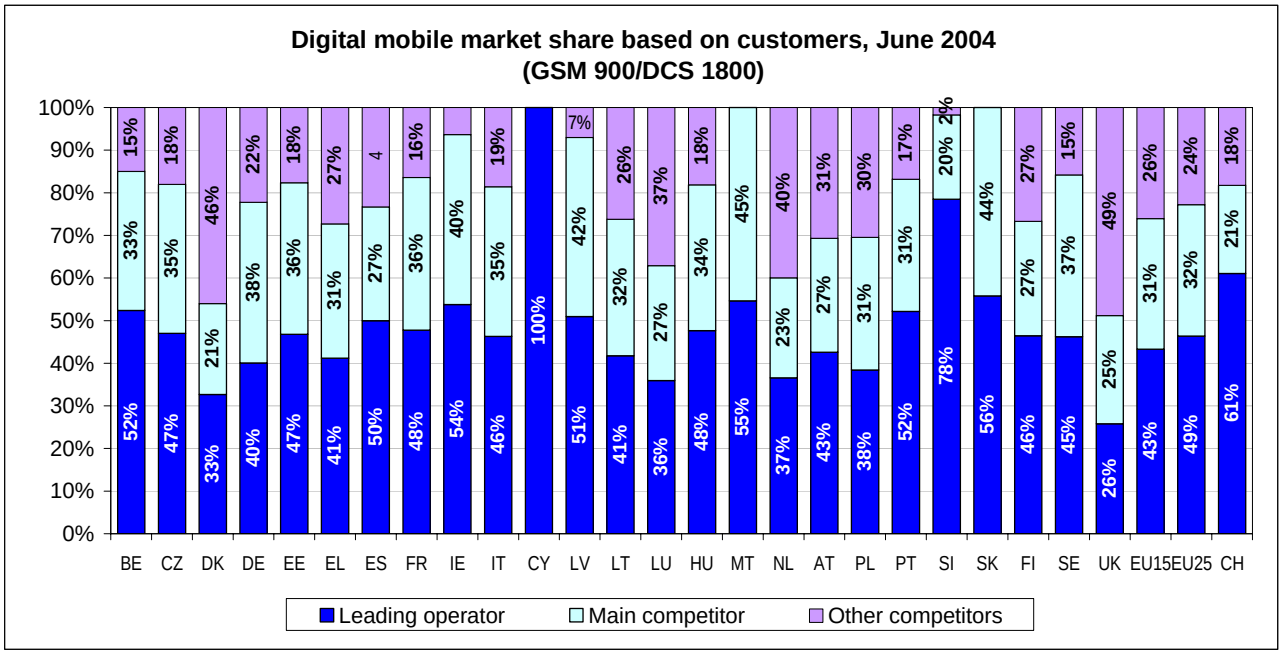
Data concerning market shares are based on the data supplied by the NRAs. When these data are confidential or not available, estimates on the number of mobile subscribers from the European Mobile Communications database are presented. Data refer to end of June 2004.

In a few countries there exist discount mobile operators which are partially or fully owned by other mobile operators. Mobile customers that have signed-up with these discount operators have been considered separately.

With the exception of Ireland, Luxembourg, the United Kingdom, Hungary, Latvia, Lithuania, Malta, Poland and Slovakia, the leading operator is a subsidiary of the incumbent fixed network operator. Figure 2 shows the shares of the leading operator, the main competitor and the other competitors in the digital mobile market only.

After Cyprus and Slovenia, Switzerland is the third country in which the subsidiary of the historic operator has the largest market shares. This rate, which is 61%, is very well above the European average (EU15 - 43%, EU 25 – 49%). The United Kingdom has the most balanced market of all, as the historic operator's subsidiary and its main competitor each have about a quarter of the market, with the other players sharing the other half.

Figure 52



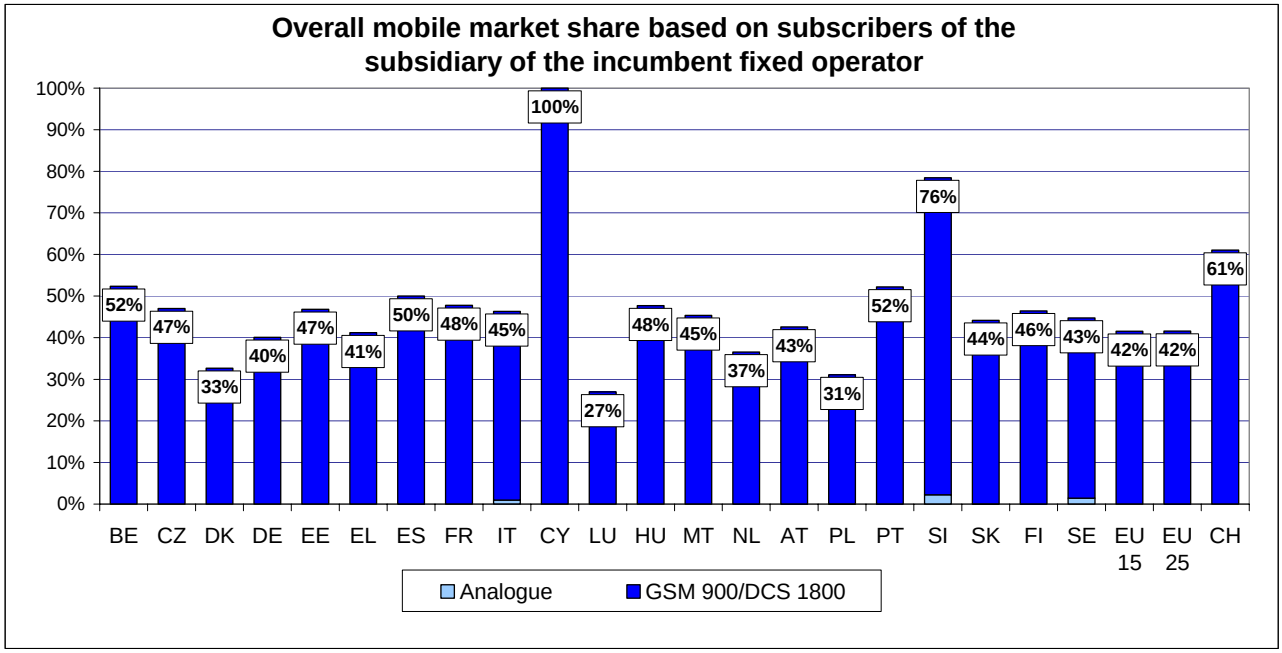
Denmark: Users of the discount operator controlled by the mobile subsidiary of the incumbent fixed operator represent 10% of the market.
Luxembourg: Users of the discount operator controlled by the mobile subsidiary of the incumbent fixed operator represent 22% of the market.

Source for Switzerland: OFCOM Switzerland.

The following chart shows the market share, in terms of subscribers, held by the mobile subsidiary of the incumbent fixed operator. Where the incumbent still operates an analogue service, the shares of the overall mobile market of their analogue and digital services are indicated separately. In the United Kingdom, Ireland, Latvia and Lithuania the fixed incumbent operator does not have a mobile subsidiary. As stated above, users of discount mobile operators controlled by the mobile subsidiaries of the incumbent fixed operators have not been included in the chart below.

Note that in nine countries out of twenty six, the historic operator's subsidiary has more than half of the market share (>50%). In Switzerland, Slovakia and Cyprus, this proportion is above 60%, whilst in the United Kingdom, Luxembourg, Denmark, Poland and the Netherlands, it is below 40%.

Figure 53



Denmark: Users of the discount operator controlled by the mobile subsidiary of the incumbent fixed operator represent 10% of the market.
Luxembourg: Users of the discount operator controlled by the mobile subsidiary of the incumbent fixed operator represent 22% of the market.

Source for Switzerland: OFCOM Switzerland.

Figures 54 and 54a trace the evolution in the distribution of market shares between the historic operator and its competitors in the EU15 Member States and in Switzerland respectively. The situation among the two groups of countries observed contrasts greatly. Thus in the Union countries, on average, a balanced distribution of market shares between the historic operators and their competitors occurred as early as the year 2000. Since then, even though the situation has been evolving only very slowly, the alternative operators have slightly strengthened their position.

The average market share of leading operators, based on subscribers in the EU15 Member States, has dropped from 46.58% last year to 43.21% this year. This year's reduction is greater than the reduction seen in the previous three years combined.

In Switzerland, on the contrary, the alternative operators are finding it more difficult to make headway and it may take some time before they break the 50% barrier, if they ever do. Examining the forces at work, it is apparent that the Swiss situation in 2004 virtually corresponds to that prevailing on average in the Union countries in 1998.

Figure 54

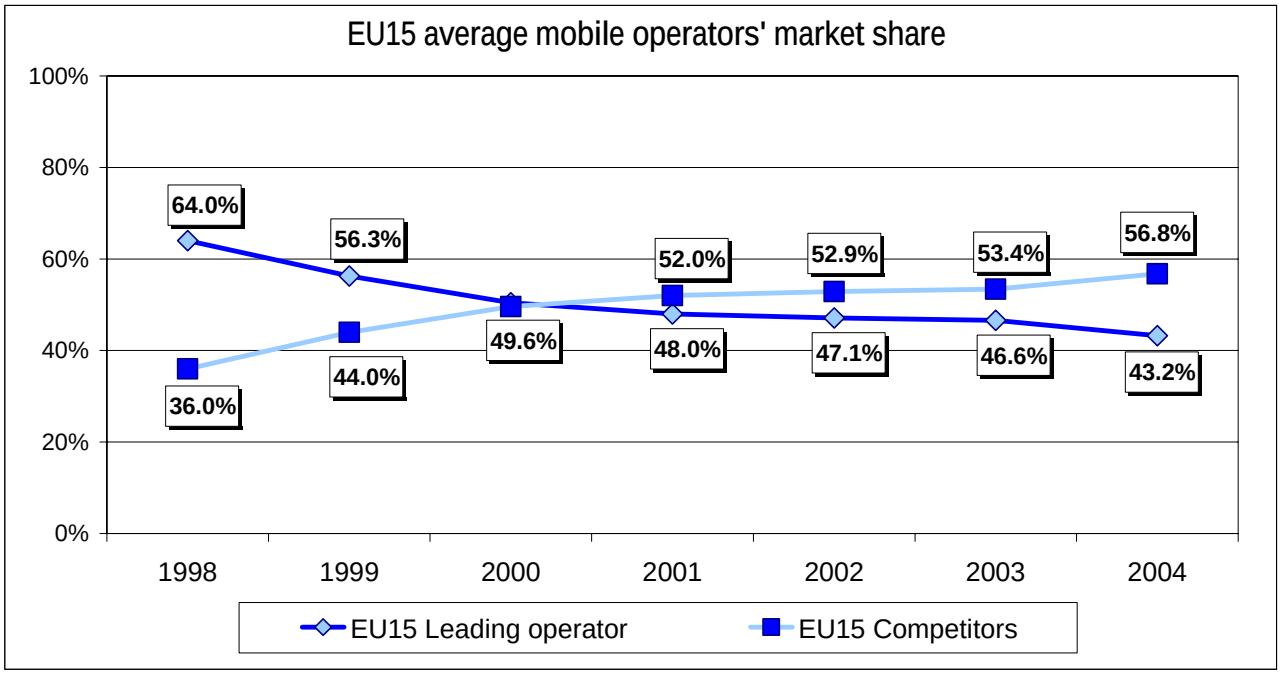
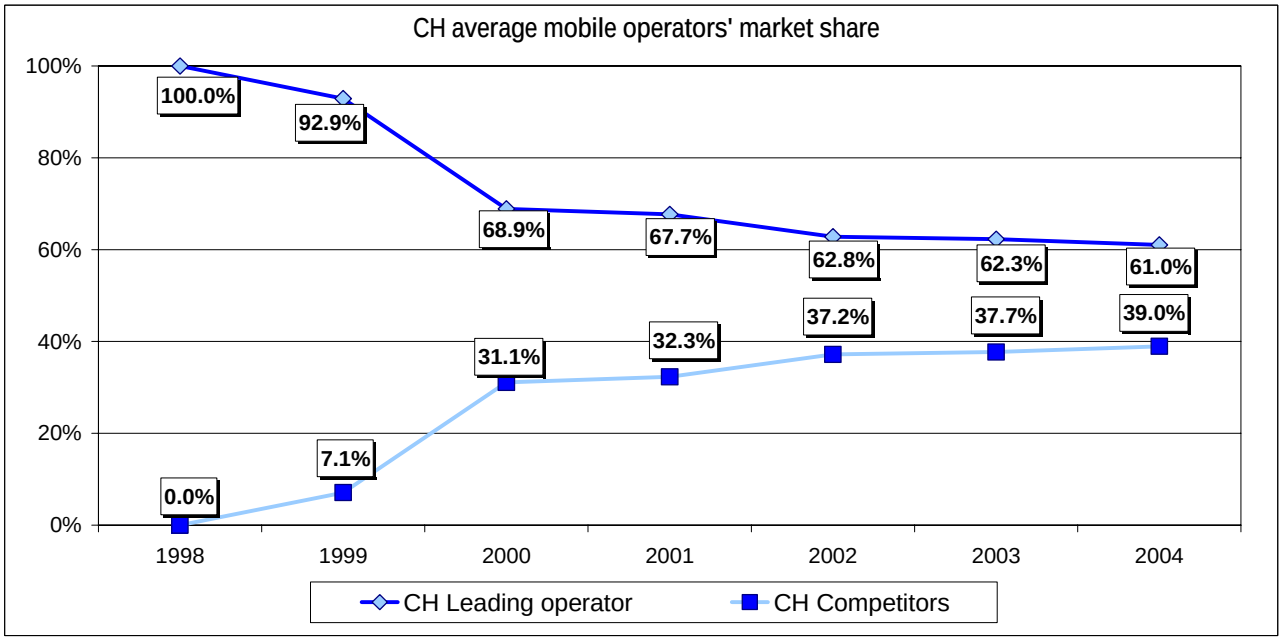


Figure 54a



Source for Switzerland: OFCOM Switzerland.

5.5. MOBILE BASKET

The analysis of national (as opposed to roaming) mobile services is based on the OECD baskets for digital mobile services. Due to significant changes in usage patterns, the OECD baskets have been redefined with effect from August 2002. The new baskets are not comparable with the "old" ones, in that they contain an SMS element, they include calls to several mobile networks, and they do not cover international calls.

The new revised baskets are used in this analysis. There are 3 different baskets, based on low, medium and high usage levels. All packages analysed in this study are Post-Paid packages. Some of the main properties of the new OECD baskets are:

- Low usage basket with:
  25 outgoing calls per month + 30 SMS messages
  42% of calls are to fixed line phones, 58% to mobile phones

- Medium usage basket with:
  75 outgoing calls per month + 35 SMS messages
  36% of calls are to fixed line phones, 64% to mobile phones
- High usage basket with:
  150 outgoing calls per month + 42 SMS messages
  40% of calls are to fixed line phones, 60% to mobile phones

Each basket also has a unique definition of time of day distribution and call duration, and includes the monthly rental, and any registration charges distributed over 3 years.

The two most prominent operators in each country are covered, based on available subscriber numbers. All relevant packages from each operator are considered, but the final results presented here only show the cheapest package for each basket.

The asterisk (*) behind the package name means that the package name and its structure have changed between 2003 and 2004. The package chosen at any time is the cheapest package from that provider for the usage profile in question. This may give rise to significant price changes over time.

The balance of fixed and usage in the mobile baskets varies considerably between countries, as the preferred packages in some countries contain a lot of calling time included in the fixed charge.

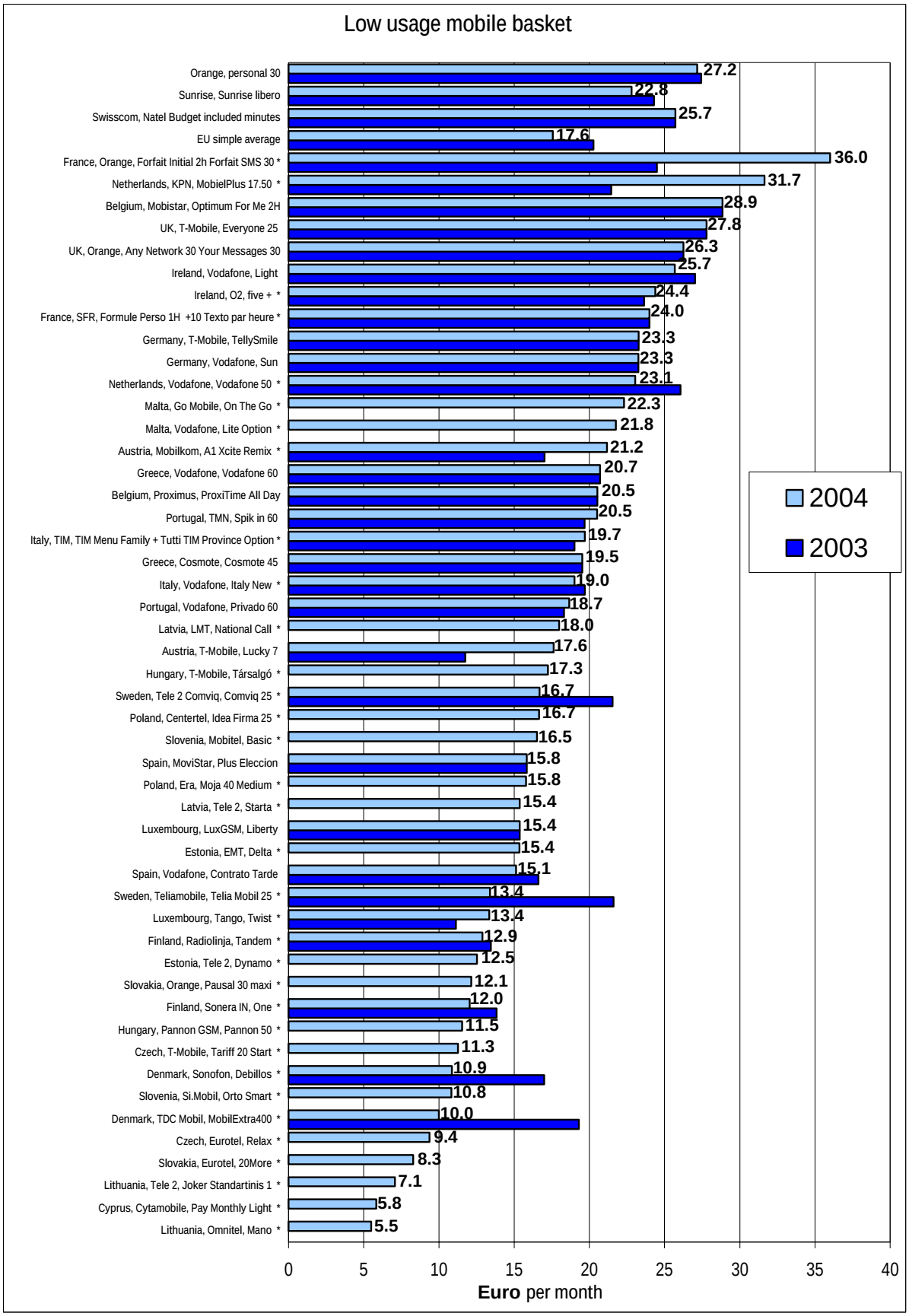
A full description of the methodology can be found at the end of this report.

In 2004, the cheapest offerings in the basket of tariffs for low users (Figure 55) are in Lithuania (5.5 € and 7.1 €), Cyprus (5.8 €) and Slovakia (8.3 €). Among the old Member States the best offers are in Denmark (10 € and 10.9 €), Finland (12 € and 12.9 €), Luxembourg (13.4 €) and Sweden (13.4 €). Switzerland, for its part, is well above the European simple average (17.6 €), with a basket at 22.8 € for Sunrise and 25.7 € for Swisscom.

For a medium user (Figure 56), the most attractive offerings are available in Lithuania (14.5 €) and Cyprus (15 €), and among the old Member States in Denmark (23 €) and Luxembourg (24.9 €), at prices distinctly lower than the European average (36.6 €). For Switzerland, we note that the cost of the cheapest basket – Orange, at 49.2 € - greatly exceeds the European average (36.6 €). As for the Swisscom Mobile basket, it is more expensive (68.5 €) than any of its rivals.

High users (Figure 57) will find the most advantageous offerings in the new Member States such as Cyprus (29.2 €) and Czech Republic (32.6 €), but also in Denmark (42 €) and Luxembourg (42.5 €). By way of comparison, we note that the European simple average is 63.4 €. Swiss users are among the worst served of all the citizens in the countries under consideration. Even though the Orange basket (66.9 €) costs 44.2 % less than that of Swisscom, the latter has the distinction of being, very clearly, the most expensive of all (119.9 €).

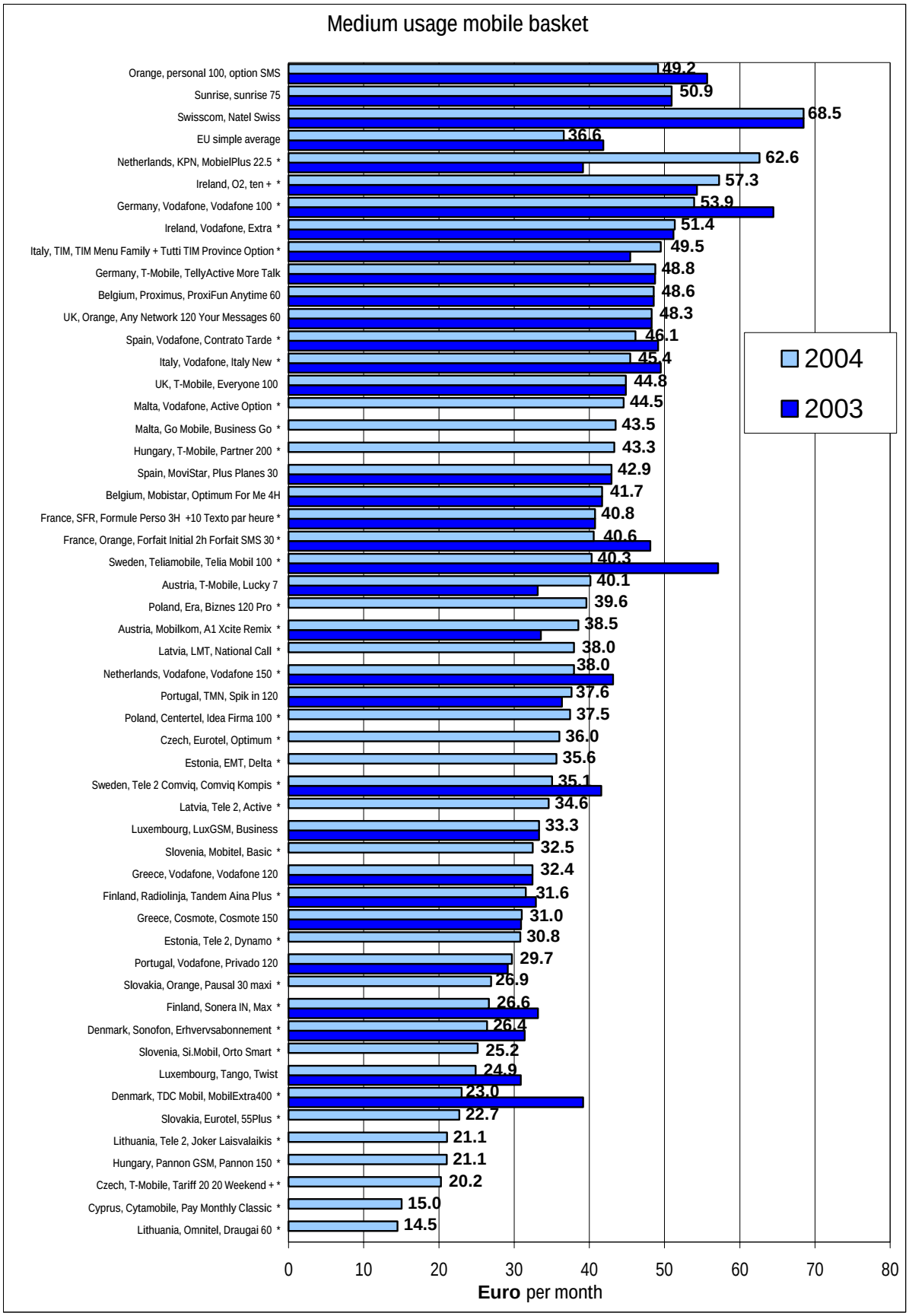
Figure 55



Entries with an asterisk (*) after the name have changed the package name and structure since last year.

Source for Switzerland: Teligen T-Basket; OFCOM Switzerland computation.

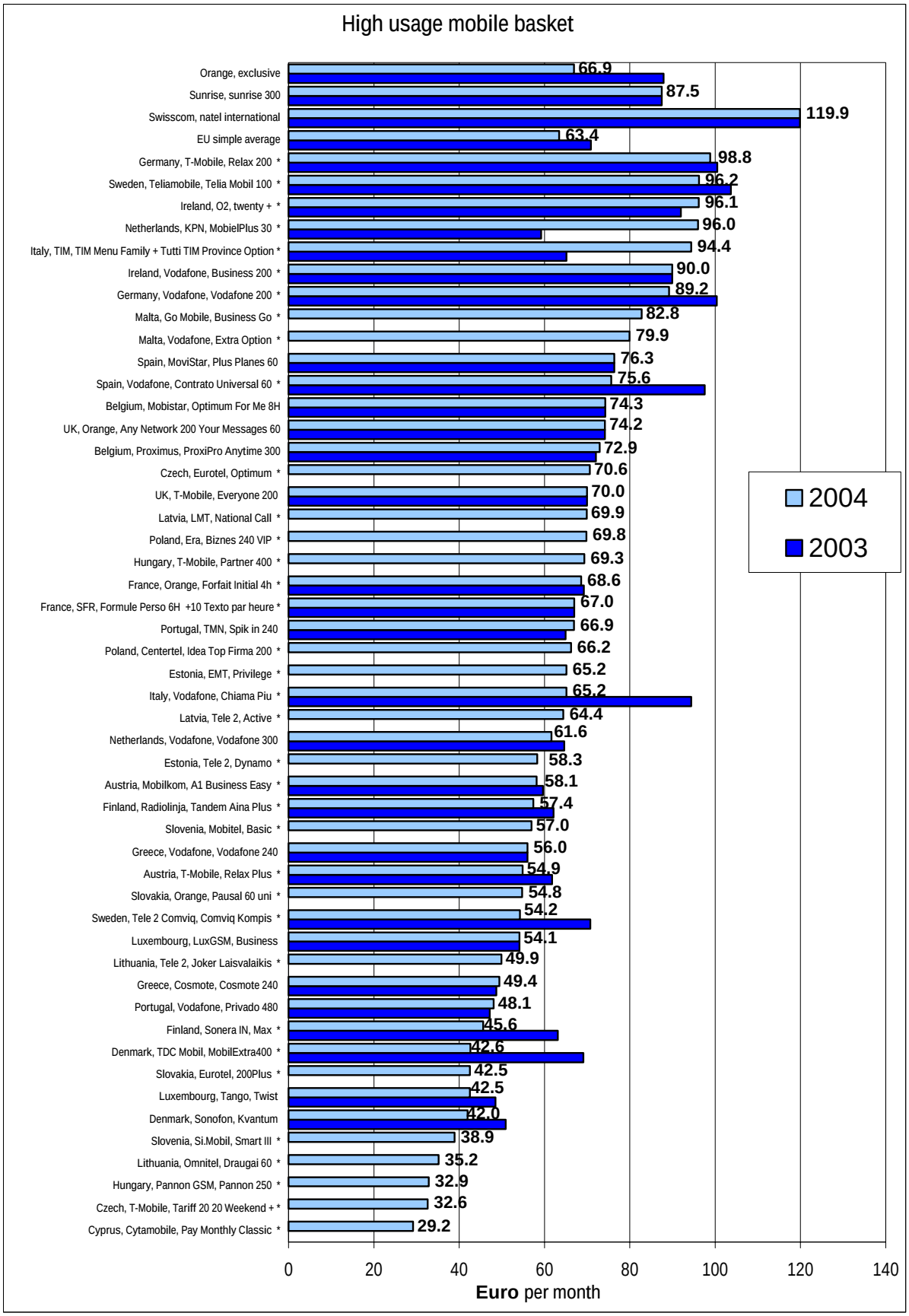
Figure 56



Entries with an asterisk (*) after the name have changed the package name and structure since last year.

Source for Switzerland: Teligen T-Basket; OFCOM Switzerland computation.

Figure 57



Entries with an asterisk (*) after the name have changed the package name and structure since last year

Source for Switzerland: Teligen T-Basket; OFCOM Switzerland computation.

6 NUMBER PORTABILITY

6.1. FIXED NUMBER PORTABILITY

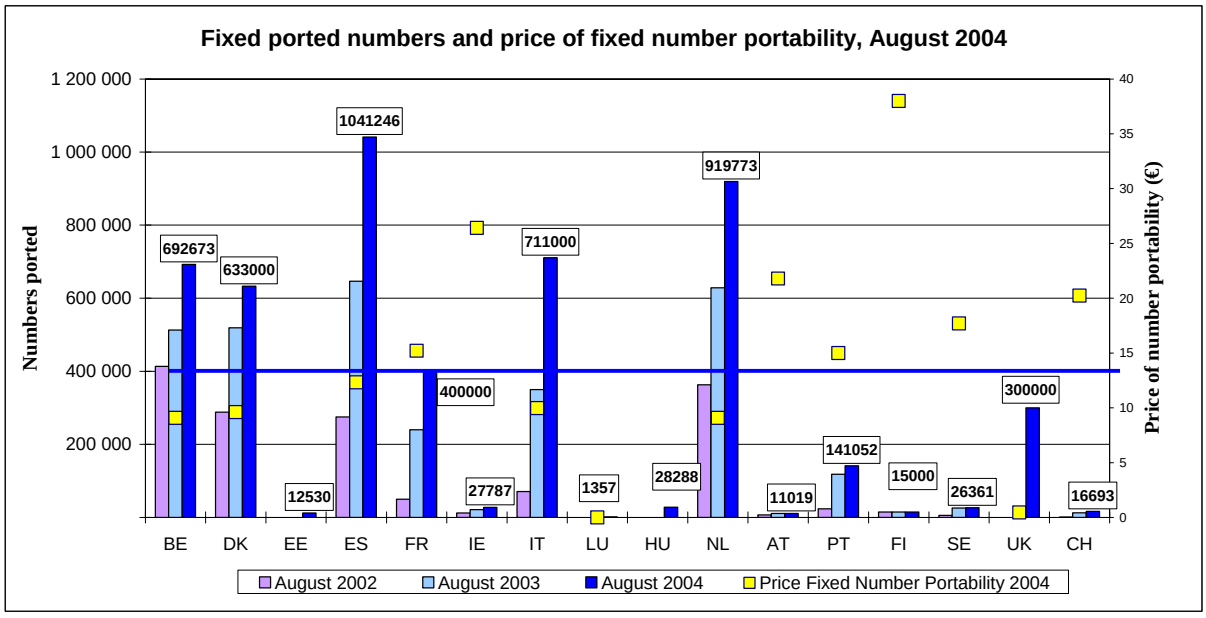
Fixed number portability (FNP) enables subscribers to retain their number when they move from one operator to another. Although it was slow to take off, there has been major increase in numbers ported during this year suggesting a more competitive environment where customers are changing operator in greater numbers. Almost 5 million numbers have now been ported in the EU. This is a 61% increase on the previous year. Spain, the Netherlands and Italy show the highest values in absolute terms.

The increase of ported numbers in Switzerland was very high between 2002 and 2003, and rather moderate between 2003 and 2004 in comparison with the average growth rate in the Union.

Prices for fixed number portability refer to the amount charged by the incumbent to the recipient operators for porting a telephone number. This price may vary depending on a number of factors.

The price in Switzerland is rather high (20.23 €). Only in three countries – Austria, Ireland and Finland - do incumbents charge even more for number portability.

Figure 58



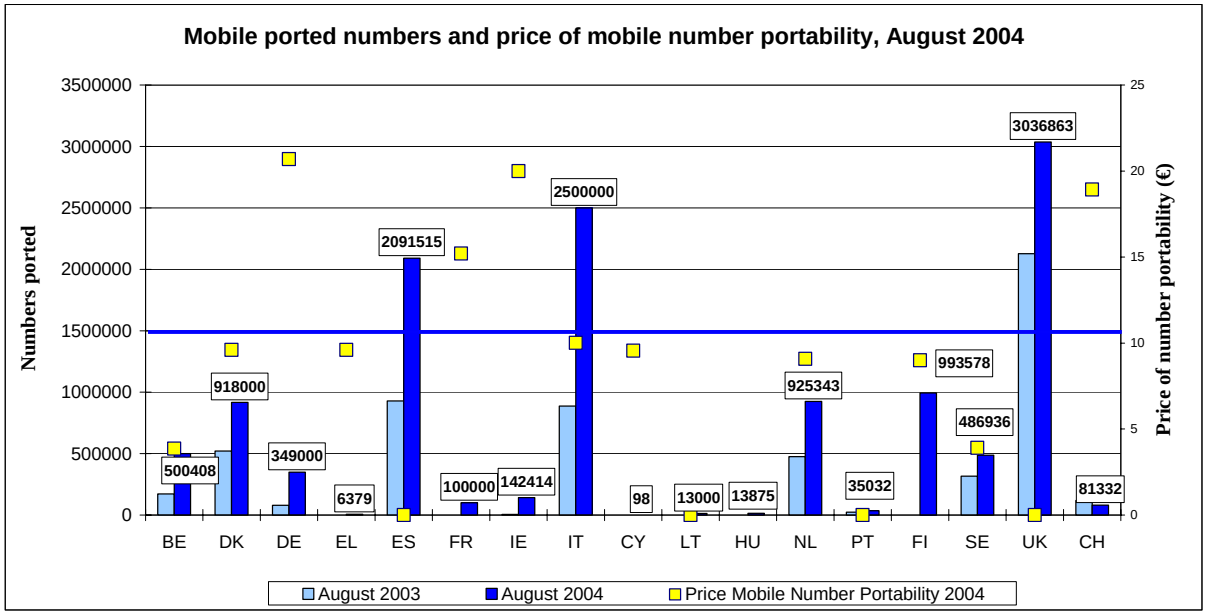
Belgium: Figures refer to July 2004 and include non-geographical numbers. Price refers to a simple installation. For a complex installation there is a € 89.7 one-off fee.
Denmark: Figures include non-geographic numbers.
Czech Republic, Germany, Greece, Cyprus, Lithuania, Slovenia: Data not available.
Estonia, Hungary, Lithuania: Number portability was introduced on 1 January 2004.
Greece: No data available
Spain, Portugal: Data refer to end June 2004
Latvia, Malta, Poland and Slovakia: Fixed number portability not available
Finland: Prices vary according to each operator
Sweden: Number of transactions. The exact amount of ported numbers is not available.
United Kingdom: NRA estimates.

Source for Switzerland: OFCOM Switzerland, operators. The data for August 2002, 2003 and 2004 refer respectively to the whole year 2001, 2002 and 2003.

6.2.MOBILE NUMBER PORTABILITY

Mobile number portability (MNP) only became compulsory in the EU with the entry into force of the new regulatory framework on 25 July 2003. However, many Member States had already introduced MNP in advance to develop competition on the mobile market. Mobile number portability (MNP) allows subscribers to retain their number when they move from one operator to another. The number of ported numbers has increased significantly during the year, with dramatic increases occurring in some countries, namely Belgium, Denmark, Germany, Spain, Ireland, Italy, the Netherlands, Finland, Sweden and the United Kingdom. Overall, 12.1 million numbers have now been ported in the EU, representing 3.2% of mobile numbers. This is a 119% increase on the previous year. Switzerland contrasts with this evolution because during the observed periods a decrease of 31% occurred. This case is unique in Europe. It is also the first time since the introduction of the mobile number portability that Switzerland faces this situation.

Figure 59



Belgium: Figures refer to July 2004. Price refers to a simple installation. For a complex installation there is a € 23.41 one-off fee.
Denmark: Numbers that have been ported repetitively are counted several times.
Germany: Data refer to 1 June 2004
Spain: Data refer to end of June 2004
Ireland: Price for number portability is being reviewed
Luxembourg, Austria, Slovenia: Data not available. MNP is applied since November 2004 in Luxembourg and since 16 October in Austria.
Czech Republic, Estonia, Latvia, Malta, Poland, Slovakia: Mobile number portability unavailable
Hungary, United Kingdom: Price is subject to commercial negotiation
Finland: Price shown is an average

Source for Switzerland: OFCOM Switzerland, operators. The data for August 2002, 2003 and 2004 refer respectively to the whole year 2001, 2002 and 2003.

The following table provides information on fixed and mobile number portability in the Member States and in Switzerland. Fixed number portability is not yet available in Latvia, Malta, Poland and Slovakia. Mobile number portability is unavailable in Czech Republic, Estonia, Latvia, Malta, Poland and Slovakia.

	Date of introduction of fixed number portability	Date of introduction of mobile number portability	Comments fixed	Comments mobile
Belgium	1 January 2000	1 October 2003	Situation on 1st July 2004. Includes non-geographical numbers.	
Czech Republic	1 January 2003	Not available		Mobile number portability shall be introduced 6 months after the Law on Electronic Communications will come into effect
Denmark	15 October 1999	1 January 2001	Includes non-geographic numbers. Numbers that have been ported repetitively are counted several times in this figure.	Numbers that have been ported repeatedly are counted several times in this figure.
Germany	1 January 1998	1 November 2002	No data available	Situation as at 1 June 2004
Estonia	1 January 2004	1 January 2005	The service was implemented on 01.01.2004 and, according to the regulation nr. 64 §151 (5), donor operators who owns a technical licence for the use of numbering series have a right to require a fee for ported number from a recipient operator, which shall not exceed 1,5 times a state fee rate per year	The service provision will start at 1 January 2005
Greece	1 January 2003	1 March 2004	From 1/6/2004 a Centralised National Reference Database is used for FNP. One-off charge per application for numbers ported successfully -There is also a fee for each rejected application (2.75)	A Centralised National Reference Database is used for MNP. One off charge per application for numbers ported successfully -There is also a fee for each rejected application (4.8)
Spain	1 January 2000	1 December 2000	As at 25 June 2004	As at 25 June 2004
France	1998 (Sep. 2001 for non-geographic numbers)	1 June 2003		
Ireland	1 November 2000	1 July 2003	Per single CLI. One-off fee. Rate falls to €3.96 per CLI for orders with 100+CLIs	Interim charge - to be reviewed.
Italy	1 January 2000	30 April 2002	In the case of incumbent acting as donor/donating	Price applicable to all mobile operators acting as donor/donating
Cyprus	12 July 2004	12 July 2004		
Latvia	Not available	Not available	Planned to be available in December 2005	Planned to be available in December 2005
Lithuania	1 January 2004	1 January 2004		

Luxembourg				Planned to be available in November 2004
Hungary	1 January 2004	1 May 2004		
Malta	Not available	Not available	The legal obligation to have fixed number portability has been in force since 1 July 2002. However, currently there is only one fixed operator in the market.	
The Netherlands	1 January 1999	1 January 1999	Current total from 1/1/2001 until July 2004 (latest figures). Service numbers are portable, however in general service numbers are allocated to end-users. The low number (unknown) of actual ported service numbers has been aggregated in the amount of fixed numbers	Current total from 1/1/1999 onwards is unknown. Current total from 1/1/2001 until July 2004 (latest figures).
Austria	27 March 2000	30 July 2004		
Poland	1 September 2004			MNP should have started in September 2004 (New telecommuniactions law regulating this issue will enter into force in Sept. 2004)
Portugal	30 June 2001	1 January 2002	As at end July 2004	
Slovenia		1 May 2004	There are no actual offering of voice telephony from alternative operators	
Slovakia	1 January 2004 (Planned)	1 January 2004 (Planned)	Not yet implemented	Not yet implemented
Finland		25 July 2003	(Business) customers can connect to several operators' networks and direct their outgoing and incoming traffic through different operators. Prices vary greatly. Sonera charges 15 and Elisa 29 euro/order + 9 euro/number (on-off fees).	One-off fee, average
Sweden	1 July 1999	1 September 2001	Number of transactions. Amount of ported numbers not available	
United Kingdom	1 January 1996	1 January 1999	Estimated. One-off charge for simple (not multi-line) ports. Providers set their own charges and these must be reasonable and cost oriented.	Until April 2004. The United Kingdom has no "incumbent" mobile operator. A small number of service providers charge customers about €30 to port. Providers set their own charges and these must be reasonable and cost oriented.
Switzerland	1 March 2000	1 March 2000		

7 BROADBAND ACCESS AND PRICING

7.1. BROADBAND ACCESS

This section provides data on the number and type of broadband lines supplied by both incumbent operators and new entrants in the EU and in Switzerland. It also contains information on access lines provided by means of alternative technologies such as wireless access (WLL), satellite and cable modems.

Information has been provided by the national regulatory authorities through the ONP COM02-18 questionnaire on data for local broadband access. Given the rapid developments in this sector, it has been agreed with NRAs to update the ONP questionnaire on a regular basis in January, July and October. Unless otherwise stated, the data below refer to the position at 1 July 2004 (also for Switzerland).

The definitions used in the charts and data below are as follows:

- Fully unbundled lines: Fully unbundled lines supplied to other operators, excluding experimental lines. In the case of full unbundling, a copper pair is rented to a third party for its exclusive use. As fully unbundled lines (ULL) supplied by the incumbent operator to the new entrants could in principle be used for services other than broadband, the total number of ULL for access to internet will be lower than the total number of ULL.

- Shared access lines supplied by the incumbent to new entrants: Shared access lines supplied to other operators, excluding experimental lines. In the case of shared access, the incumbent continues to provide telephony service, while the new entrant delivers high-speed data services over that same local loop.

- Bitstream access: Supplied to new entrants. Bitstream access refers to the situation where the incumbent installs a high-speed access link to the customer premises and then makes this access link available to third parties, to enable them to provide high-speed services to customers. Bitstream depends in part on the PSTN and may include other networks such as the ATM network. Bitstream access is a wholesale product that consists of the provision of transmission capacity in such a way as to allow new entrants to offer their own, value-added services to their clients. The incumbent may also provide transmission services to its competitor, to carry traffic to a 'higher' level in the network hierarchy where new entrants may already have a broadband point of presence.

- Simple resale: In contrast to bitstream access, simple resale occurs where the new entrant receives and sells on to end users - with no possibility of value added features to the DSL part of the service - a product that is commercially similar to the DSL product provided by the incumbent to its own retail customers, irrespective of the ISP service that may be packaged with it. Resale offers are not a substitute for bitstream access because they do not allow new entrants to differentiate their services from those of the incumbent (i.e. where the new entrant simply resells the end-to-end service provided to him by the incumbent on a wholesale basis).

- Incumbent's DSL lines: Provided to end users by the incumbent, its subsidiaries or partners (for example an associated company such as a joint venture providing ISP services).

- WLL: Internet broadband connections by means of wireless local loop (sometimes referred to as fixed wireless access)

- Cable modem: Internet broadband connections by means of cable TV access

- L.L.: Internet broadband connections by means of dedicated capacity (Leased Lines) provided over metallic copper pairs, including tail ends or partial circuits. “Incumbent's leased lines” includes only retail lines and excludes lines provided to other operators. “New entrants' leased lines” includes all retail lines provided to end users, even if based on wholesale lines supplied by the incumbent.

- Other: Internet broadband connections by means of 3G, satellite, fibre optic, powerline communications, etc.

The figures relating to Switzerland include ADSL and cable modem connections only. The other means of accessing the internet have not been considered, due to the lack of information in our possession. However, the quantitative importance of these other types of access represents a negligible proportion of the overall broadband market.

- Retail access: Access provided to end users.

- Incumbents are defined as the organisations enjoying special and exclusive rights or *de facto* monopoly for provision of voice telephony services before liberalisation, regardless of the role played in the provision of access by means of technologies alternative to the PSTN.

- “New entrants” refers to alternative telecommunications operators, as well as internet service providers (ISPs).

- Broadband capacity: Capacity equal to, or higher than, 144 Kbit/s.

7.2. WHOLESALE ACCESS

This section shows the availability of wholesale access lines supplied by incumbent operators to new entrants. Separate figures are provided for fully unbundled lines, shared access and bitstream access.

Data from the New Member States are included when available. As can be seen from the table at the end of this section, data are not always available, especially as regards wholesale lines. Fully unbundled and shared lines are not available in Cyprus, Malta, Poland and Slovakia. Shared access lines are not available in Estonia. In the figures below for wholesale lines ,some operators have also included the lines that the wholesale division supplies to its retail division or to its ISP subsidiary.

In Belgium and Austria, the wholesale lines supplied to the incumbent's retail division are not included.

The table below shows the number of agreements between operators for ULL, shared access, bitstream and resale as at 1 July 2002, 2003 & 2004.

Table 1 Number of agreements for full ULL, shared access, bitstream access and resale, 2002-2004.

	N. of agreements on fully unbundled lines			N. of agreements on shared lines			N. of agreements on Bitstream access			N. agreements on resale lines		
	July 2002	**July 2003**	**July 2004**	**July 2002**	**July 2003**	**July 2004**	**July 2002**	**July 2003**	**July 2004**	**July 2002**	**July 2003**	**July 2004**
BE	7	8	8	4	8	8	4	9	10	12	21	25
CZ			2			2						
DK	16	13	17	5	4	5	5	7		1		
DE	91	74	86	3	5	9	2			52		
EE			7									4
EL	2	7	7						6			
ES	6	9	9	6	9	9	38	40	30	n.a.	n.a.	
FR	9	9	13	9	9	14	4	5	5	5	20	n.a.
IE	1	1	3	1	1	3		3	7			
IT	31	31	27	2	2	2	50	45	196	n.a.		
CY			n.a.			n.a.			n.a.			n.a.
LV												11
LT									17			
LU	n.a.	2	3	n.a.	2	3	n.a.			n.a.	1	3
HU									18			
MT												15
NL	10	12	12	10	12	12	n.a.	1	1	n.a.		
AT	12	17	20			20	24	24	38			
PL												
PT	4	4	2	n.a.	n.a.		4	8	9			
SI									4			
SK												
FI	180	n.a.	n.a.	80	n.a.	n.a.	60	n.a.	n.a.	35	n.a.	n.a.
SE	33	63	110	33	63	110	4	23	26	5	11	n.a.
UK	53	57	59	5	7	12	309	n.a.	28	0	535	763
EU	**455**	**307**	**385**	**158**	**122**	**209**	**504**	**165**	**389**	**110**	**588**	**821**
CH*	0	0	0	0	0	0	0	0	0	20**	29***	28

*** Note that the 28 competing operators have in turn concluded reselling agreements with other providers. In Switzerland, there are some 60 companies offering ADSL services.**
**** as of September 2002**
***** as of February 2004**

Figure 600 shows the distribution of wholesale access lines supplied by the incumbent operators to new entrants. There has been a huge surge of 110% in wholesale unbundled local loops (fully unbundled lines and shared access lines), from 1.8 million in July 2003 to more than 3.8 million, in July 2004, representing almost 2% of the PSTN lines in the EU15. This increase comprises approximately one million fully unbundled lines and one million shared access lines. The number of shared access lines increased from 191 500 to 1 168 828 lines, an increase of 505%. The biggest increases were experienced in France and Sweden (shared access) and Italy, Germany, Austria and Finland (fully unbundled). It should be noted that, in the two countries where the number of fully unbundled lines is highest, Germany and Italy, only 36% (Germany) and 42% (Italy) of the fully unbundled lines are used for the provision of retail broadband services. The growth of 237% in wholesale bitstream access during the year is also notable, from 795 071 lines in July 2003 to 2 681 398 lines in July 2004. Fully unbundled lines and shared lines, as well as bitstream access, have not yet been implemented concretely in Switzerland. This is why the figures for Switzerland in the three charts below are equal to "0".

Figure 60

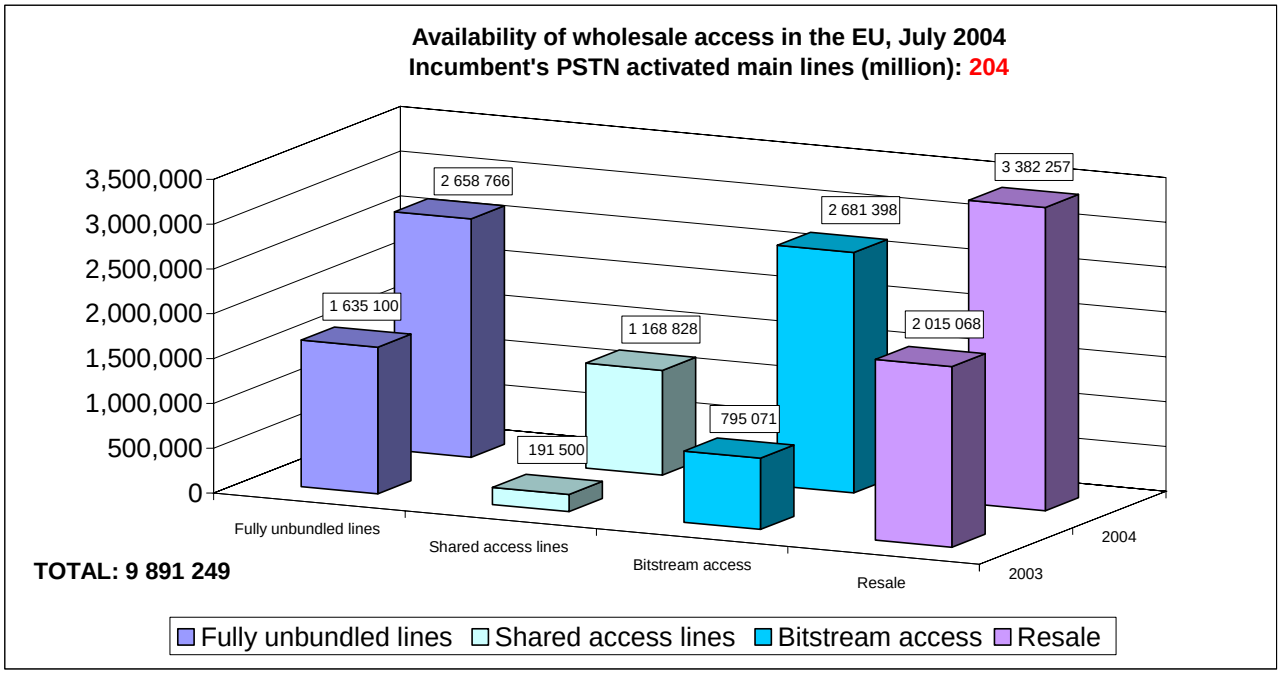
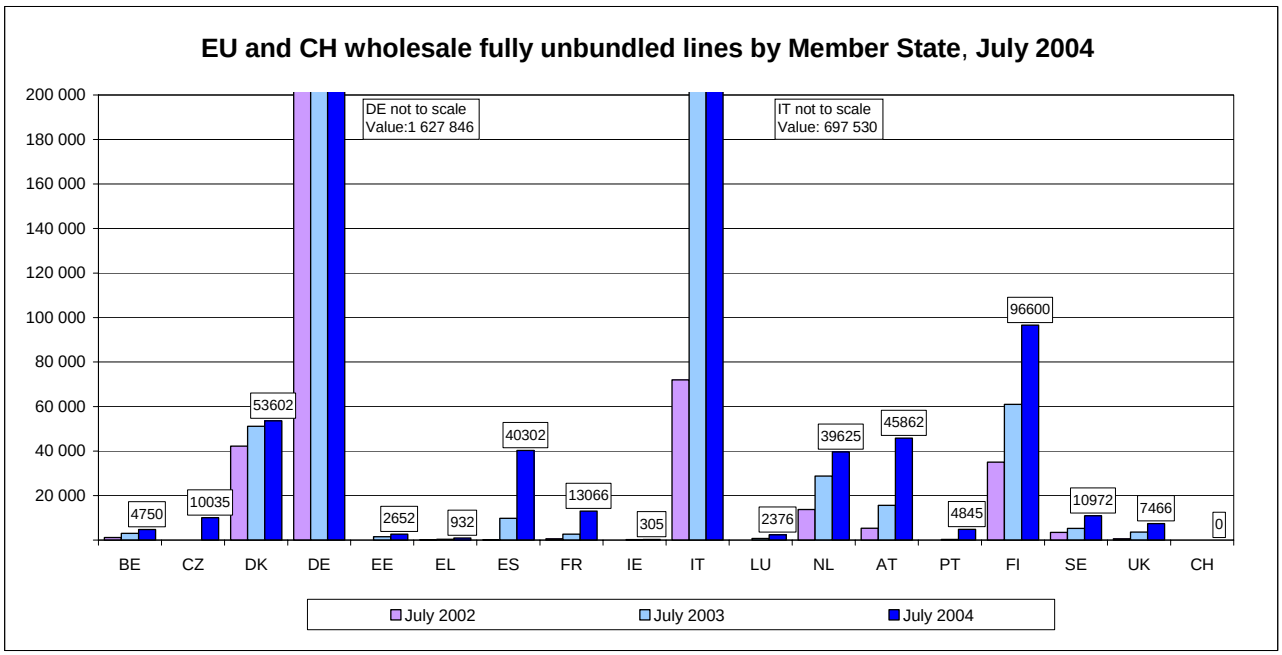
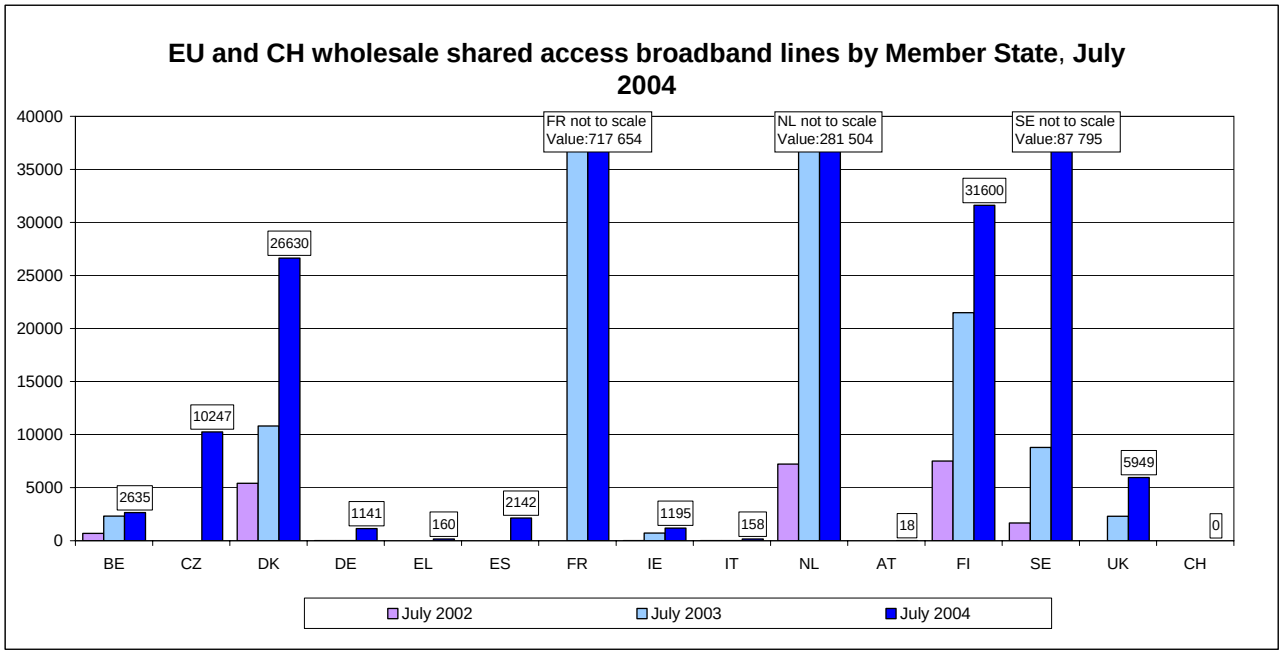


Figure 61



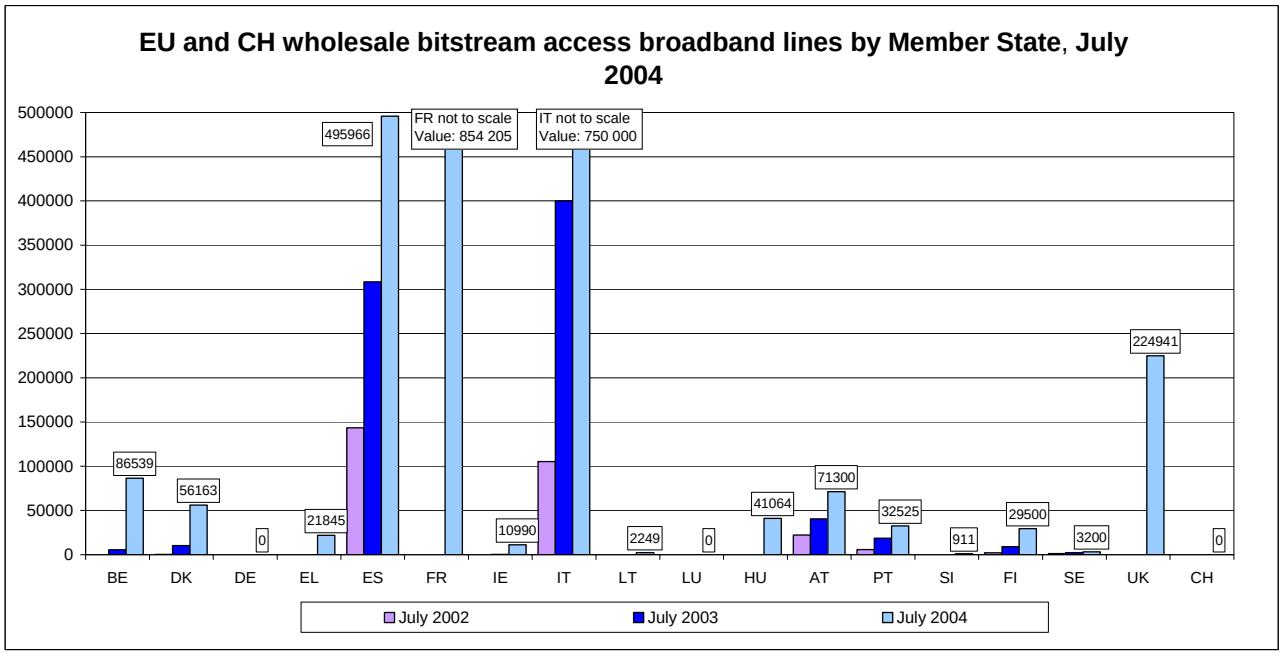
Source for Switzerland: OFCOM Switzerland.

Figure 62



Source for Switzerland: OFCOM Switzerland.

Figure 63



Including lines sold to the incumbents' retail divisions and ISPs
France: In March 2004 a wholesale offer for broadband at regional level was introduced (IP ADSL regional Option 5). 44% of IP ADSL lines have been migrated to this offer, which explains the huge increase.

Source for Switzerland: OFCOM Switzerland.

7.3. RETAIL BROADBAND ACCESS

This section provides information on the deployment of broadband access lines by incumbents (and their subsidiaries or partners) and by new entrants (alternative telecom operators or Internet Service Providers) to end-users.

Internet broadband access can be provided by different means: DSL lines, wireless local loop (WLL), cable TV access (cable modem), dedicated leased lines and other access (like satellite, fibre optic, powerline communications, etc.)

New entrants' DSL lines can be provided to end users by means of fully unbundled or shared access lines, bitstream access or resale.

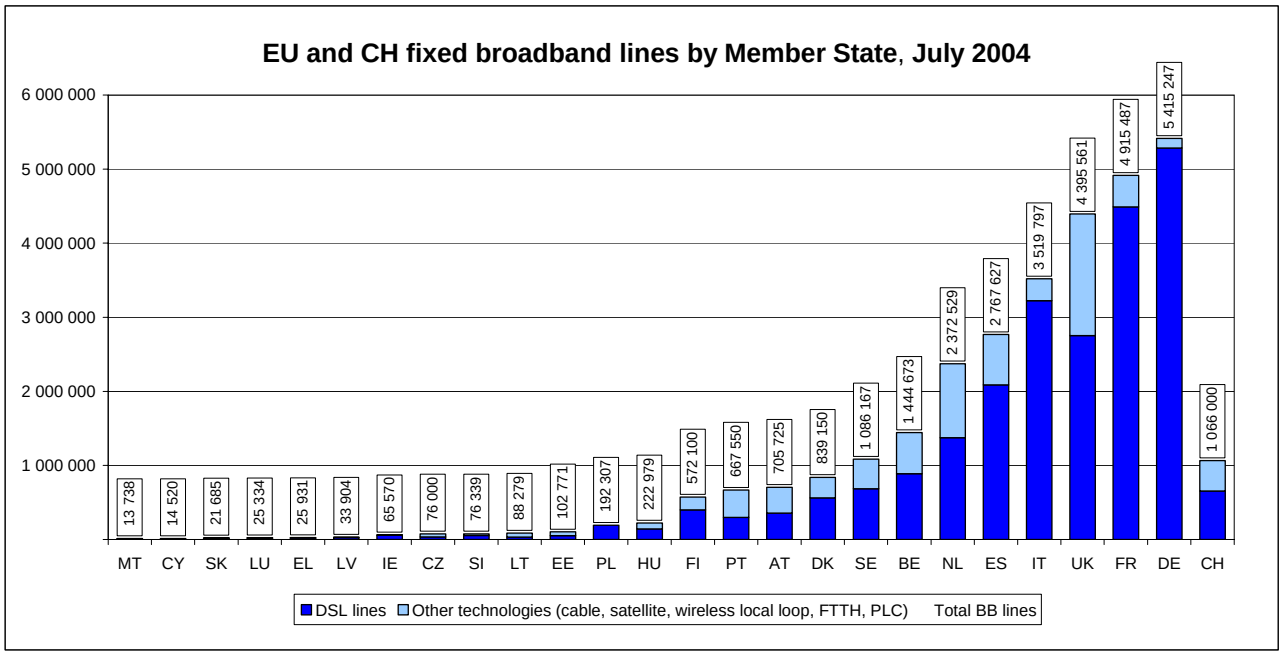
In all the charts below on fixed broadband retail lines the data refer to 1 July 2004 except for Hungary, where data refer to end of March 2004. The figures for Poland do not include cable modem lines.

The charts below only include fixed broadband lines. Data on 3G mobile subscribers are also available in the table at the end of this section.

Figure 64 shows the total number of broadband access lines for each Member State and Switzerland, provided by both incumbents and new entrants, and including all types of fixed broadband connections.

In July 2004, Switzerland had 1'066,000 broadband lines (active customers). Note that 656,000 customers are connected using ADSL technology and 410,000 are connected by cable modem. In the international comparison, Switzerland is on a par with countries such as Sweden and Denmark, i.e. in the company of countries with a low proportion of the European market (3.6% of the European market for Switzerland).

Figure 64



Source for Switzerland: Swisscom; Swisscable.
Note: Leased line, optical fibre, PLC, satellite, WLL, etc. services are not included. Only ADSL and cable modem services are taken into account.

The following chart presents the number of broadband lines per Member State and Switzerland in July 2002, July 2003 and July 2004. France has experienced the largest growth in absolute figures, adding 2.5 million broadband lines during the year, followed by the United Kingdom (2.2 million) and Italy (2 million).

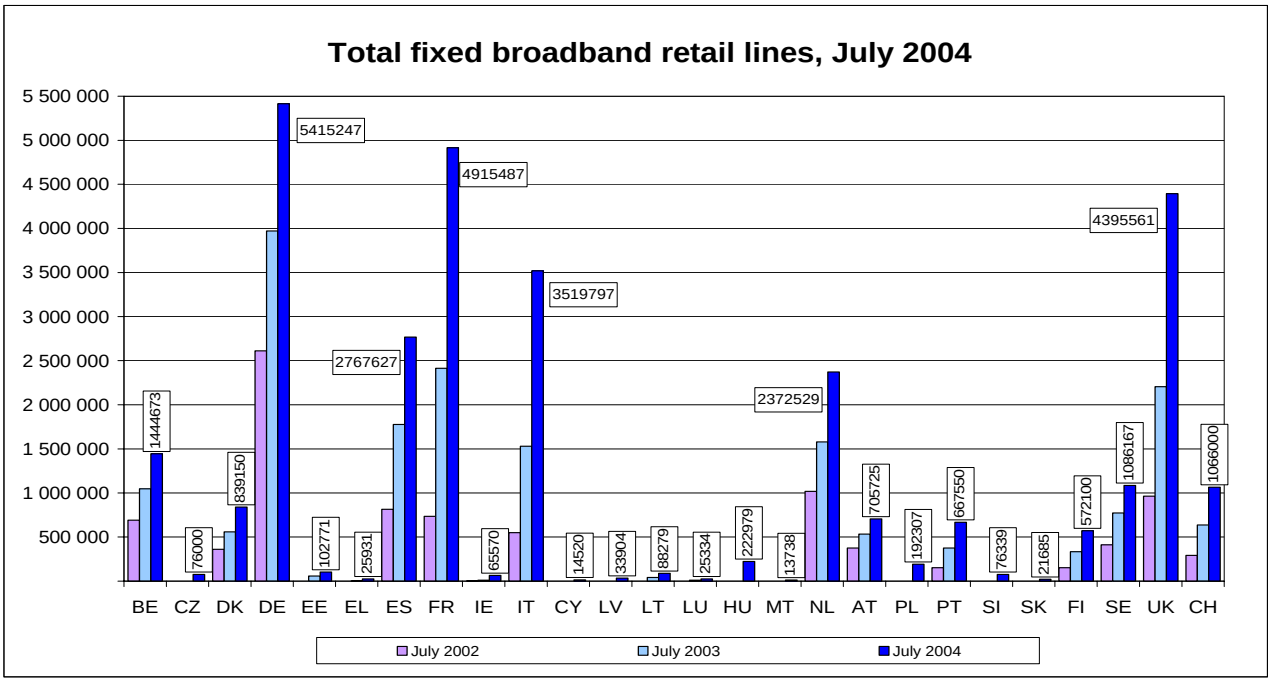
An examination of Figures 65, 66 and 67 reveals that the growth in broadband connections was substantial between July 2002 and July 2004, regardless of the type of access used:

- + 266% for total broadband connections (Figure 65);
- + 550% for ADSL broadband connections (Figure 66);
- + 115% for cable modem broadband connections (Figure 67).

This situation can also be observed in most of the European Union countries. All the countries saw a significant increase in the number of broadband connections, although DSL access enjoyed higher growth rates than the other means of accessing the internet (CATV, etc.).

It is however advisable to be cautious with the growth rates since the countries are not all in the same phase of market development, some being more advanced in their progress along the S-curve and hence showing lower growth rates (consolidation of the market).

Figure 65

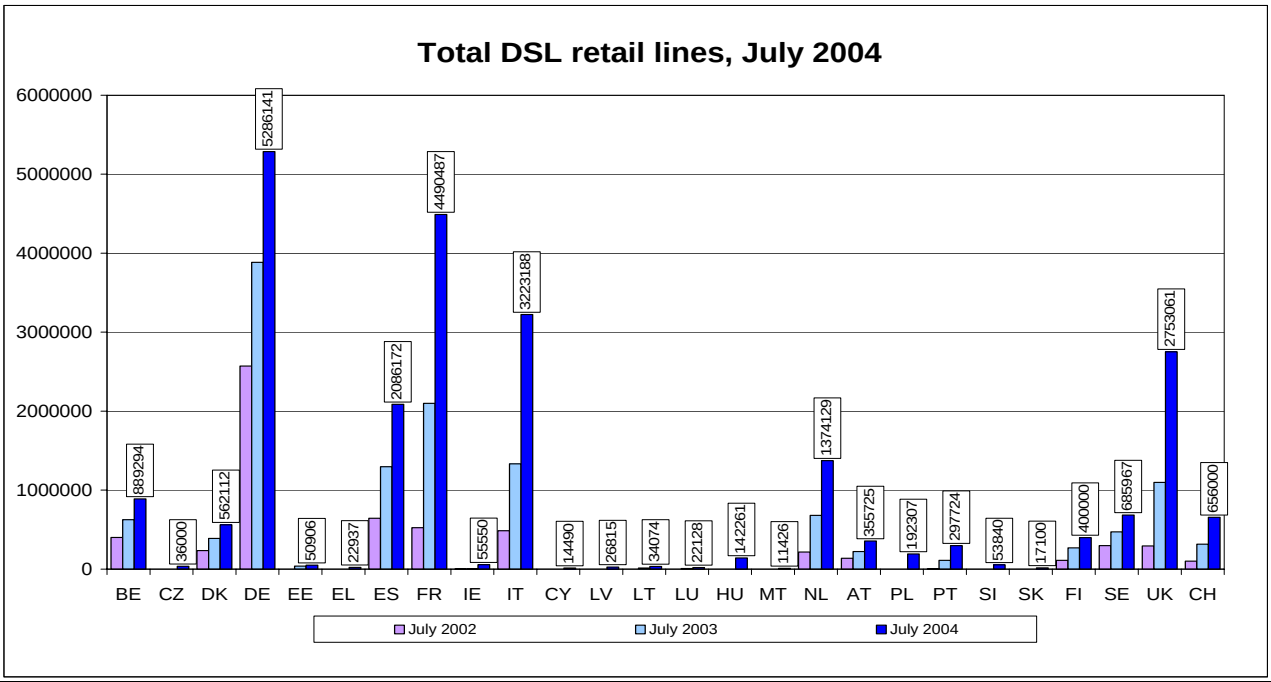


The chart above only includes fixed lines. 3G subscribers in Italy, United Kingdom, Sweden, Austria, as well as in other Member States are not included (see mobile telephony section)

Source for Switzerland: Swisscom; Swisscable.
Note: Leased line, optical fibre, PLC, satellite, WLL, etc. services are not included. Only ADSL and cable modem services are taken into account.

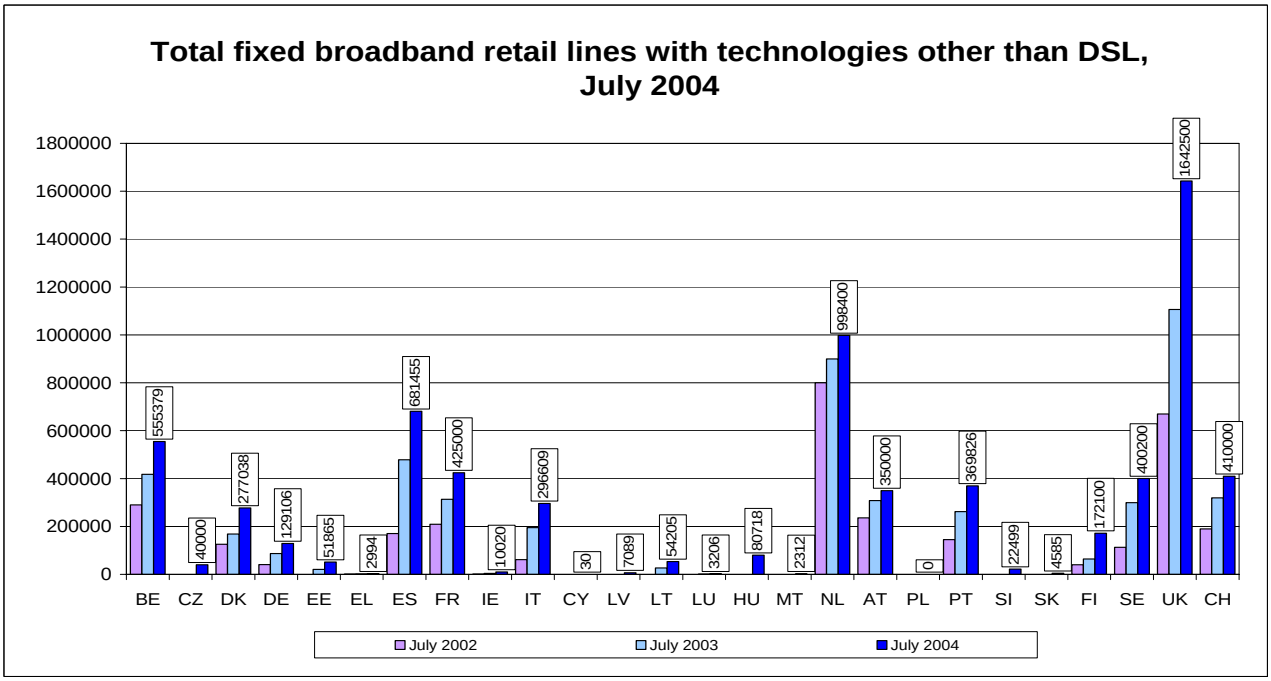
The following two charts show the breakdown of broadband lines according to the two main types of technologies. Figure 66 shows the number of DSL lines. Germany has the highest number of lines, followed by France, Italy and the United Kingdom. Again the highest growth in absolute figures has occurred in France, with 2.4 million lines. In Italy 1.9 million lines were added. With regard to the number of million of broadband lines using transmission means other than DSL (Figure), the United Kingdom, the Netherlands and Spain account for 50% of the existing 6.6 million lines. There are 1.6 million in the United Kingdom, almost 1 million in the Netherlands and around 0.7 million in Spain. The biggest increases were experienced in the United Kingdom (0.5 million) and Spain (0.2 million). Cable modem is the most common technology, followed by fibre to the home. Other technologies are still marginal.

Figure 66



Source for Switzerland: Swisscom; Swisscable.
Note: Leased line, optical fibre, PLC, satellite, WLL, etc. services are not included. Only ADSL and cable modem services are taken into account.

Figure 67



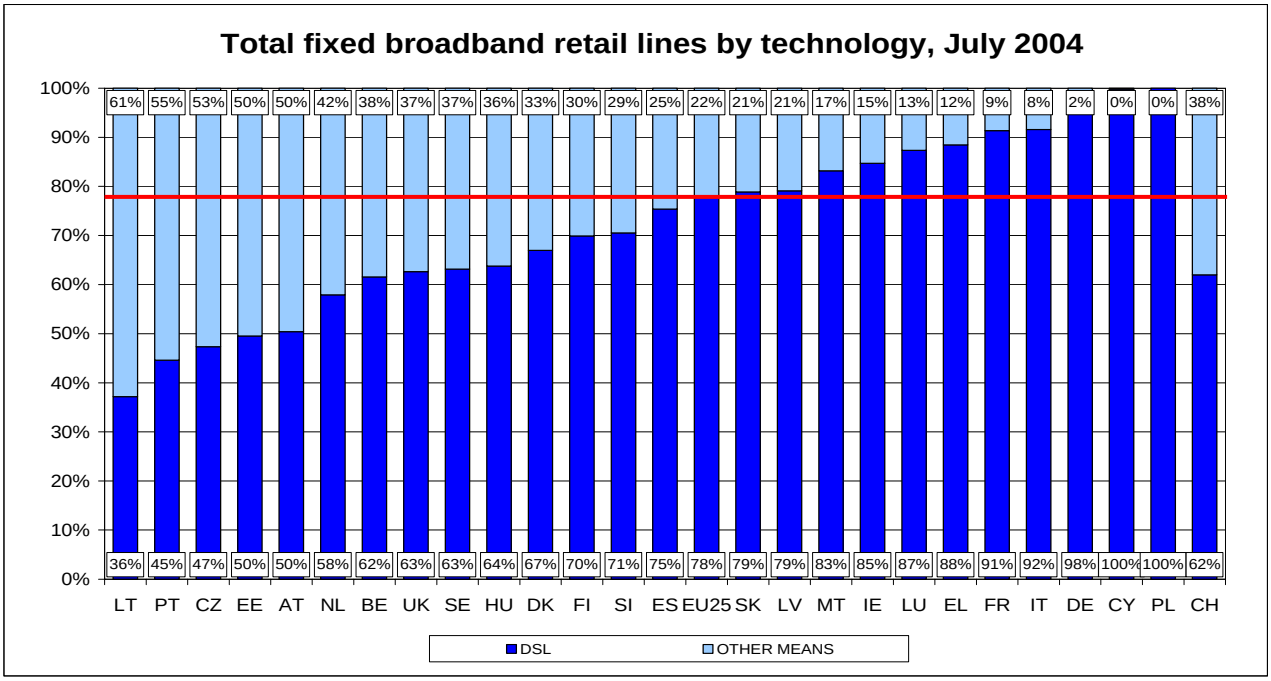
The chart above only includes fixed lines. 3G subscribers in Italy, United Kingdom, Sweden, Austria, as well as in other Member States are not included (see mobile telephony section)
Data on cable modem in Poland unavailable

Source for Switzerland: Swisscom; Swisscable.
Note: Leased line, optical fibre, PLC, satellite, WLL, etc. services are not included. Only cable modem services are taken into account.

The following charts provide information on the national broadband markets according to the technology used and the type of operator. Figure 68 shows that DSL is the predominant technology in the EU. On average, 78% of the EU25 broadband lines use DSL technologies and, only in three countries, do DSL lines represent less than 50% of the overall market.

Following the example of Belgium, the United Kingdom, Sweden or the Netherlands, the broadband access market in Switzerland is split in favour of the DSL technologies (only ADSL technology is considered in the case of Switzerland). As the broadband market develops in Switzerland, this proportion, relatively equal in July 2003, is constantly changing and cable modem technology is losing in growth rates and proportion of customer base. A broader coverage and publicity campaigns launched by resellers of the Swisscom wholesale product largely explain this trend.

Figure 68



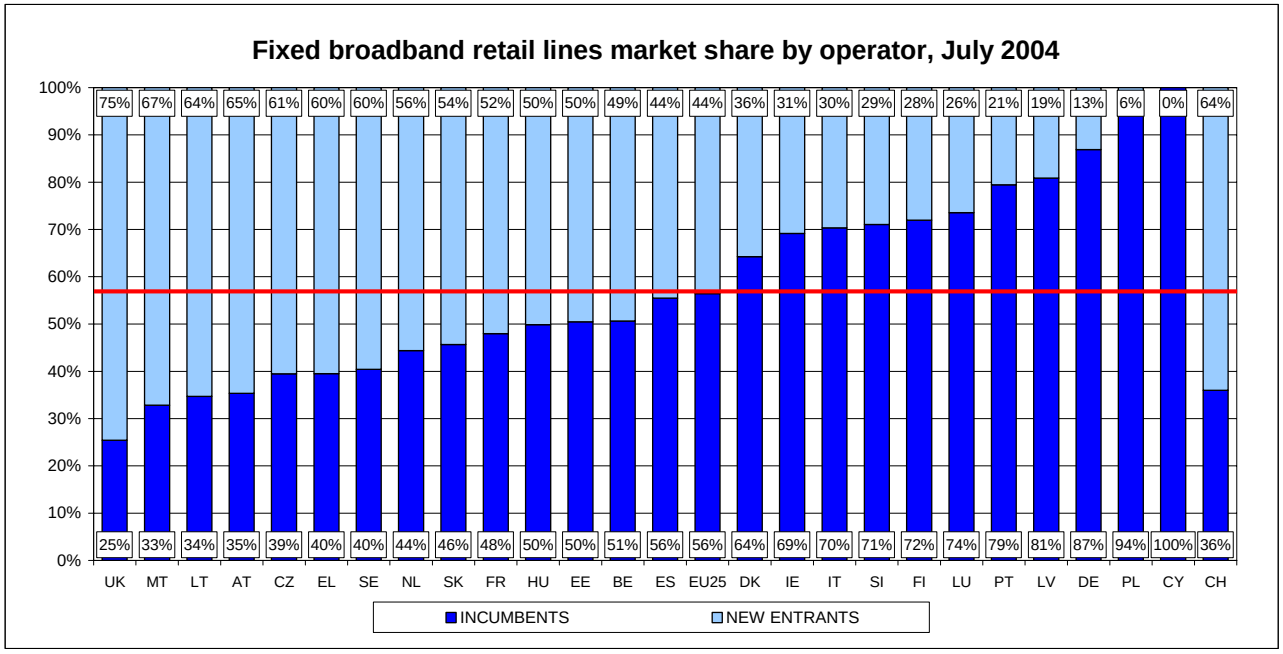
The chart above only includes fixed lines. 3G subscribers in Italy, United Kingdom, Sweden, Austria, as well as in other Member States are not included (see mobile telephony section)

Source for Switzerland: Swisscom; Swisscable.
Note: Leased line, optical fibre, PLC, satellite, WLL, etc. services are not included. Only ADSL and cable modem services are taken into account.

With regard to the market share of fixed incumbent operators and new entrants, Figure 69 indicates that, on average, incumbent operators control 56% of broadband lines. There are significant differences between Member States: In Germany the incumbent owns 87% of the lines, whereas in the United Kingdom this figure is as low as 25%.

Switzerland is on a par with Austria and Czech Republic. The proportion of broadband connections held by the ratail subsidiary of the historic operator is relatively low in comparison with the other European Union countries. In Switzerland, the competing operators had 64% of all broadband connections in July 2004 (however, 72% in July 2003).

Figure 69



Source for Switzerland: Swisscom; Swisscable.
Note: Leased line, optical fibre, PLC, satellite, WLL, etc. services are not included. Only ADSL and cable modem services are taken into account.

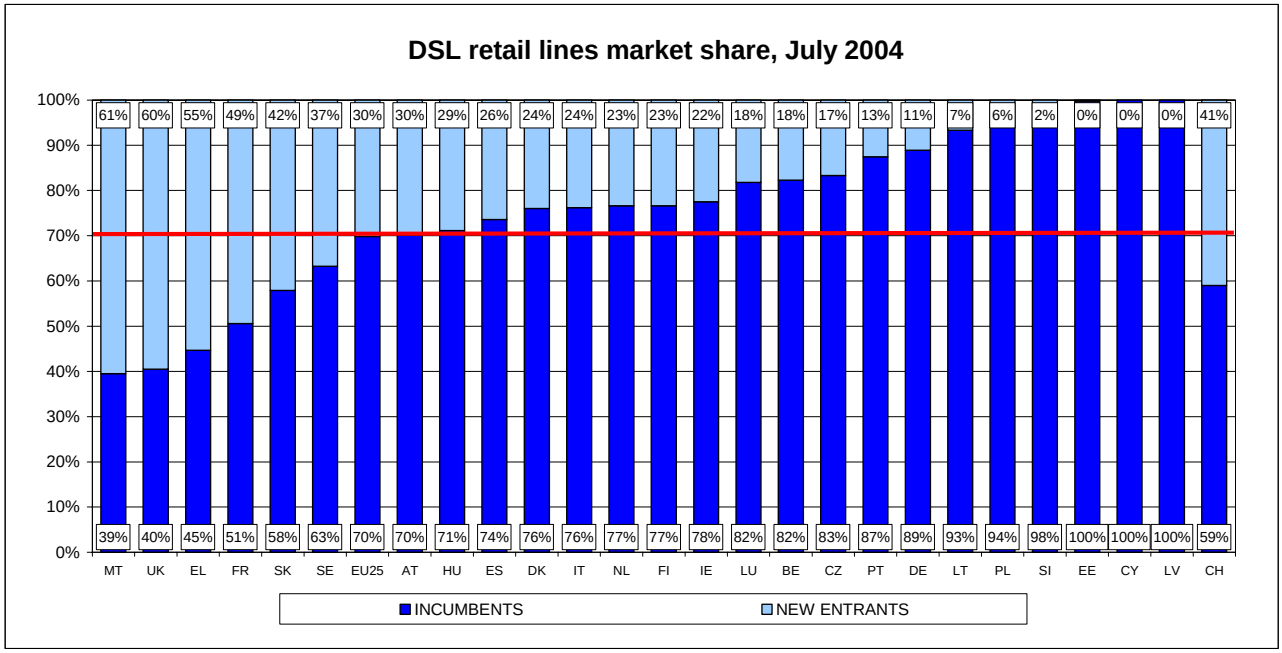
Figure 70 presents the market share by operator in the DSL retail market. At EU25 level the fixed incumbent operator provides 70% of DSL lines. In 11 Member States the incumbent operator sells more than 80% of all DSL retail lines.

In Switzerland, the ADSL market is split in favour of the historic operator, the other 41% of the connections are held by competing operators. In the international comparison, Switzerland occupies a relatively balanced position as regards the division of the market.

This situation should not, however, obscure the fact that resale is the only means accessible to the alternative operators, apart from the construction of their own access network, for them to market their own products. However, unlike the possibilities offered by unbundling and bitstream, resale limits the added value which the alternative operator can bring to the value-creation process.

Moreover, the market share held by the subsidiary of the incumbent operator, increased from 56% to 59% during the observed period.

Figure 70

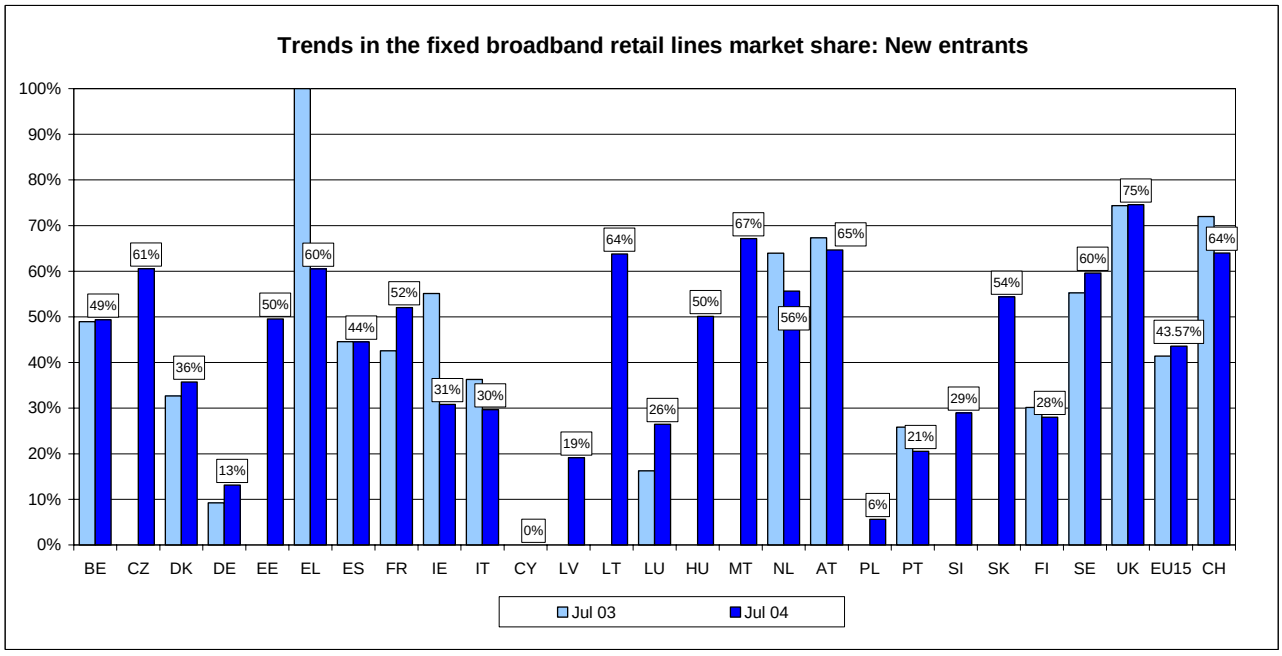


Source for Switzerland: Swisscom; Swisscable.
Note: Leased line, optical fibre, PLC, satellite, WLL, etc. services are not included. Only ADSL and cable modem services are taken into account.

The next series of charts provide further information on the trends observed in the three segments analysed previously. As can be see from

Figure 71, new entrants are steadily increasing their presence in the overall broadband market, with an average 43.6% market share against 41.3% a year ago. This trend is however not uniform, and in countries such as Greece, Ireland, Italy, the Netherlands, Portugal and Switzerland the fixed incumbent operator has increased its market share. In Switzerland, this situation is explained by the substantial expansion in absolute terms of the number of broadband ADSL connections (greater than the expansion of cable modems). More than half of the connections are held by the subsidiary of the historic operator.

Figure 71

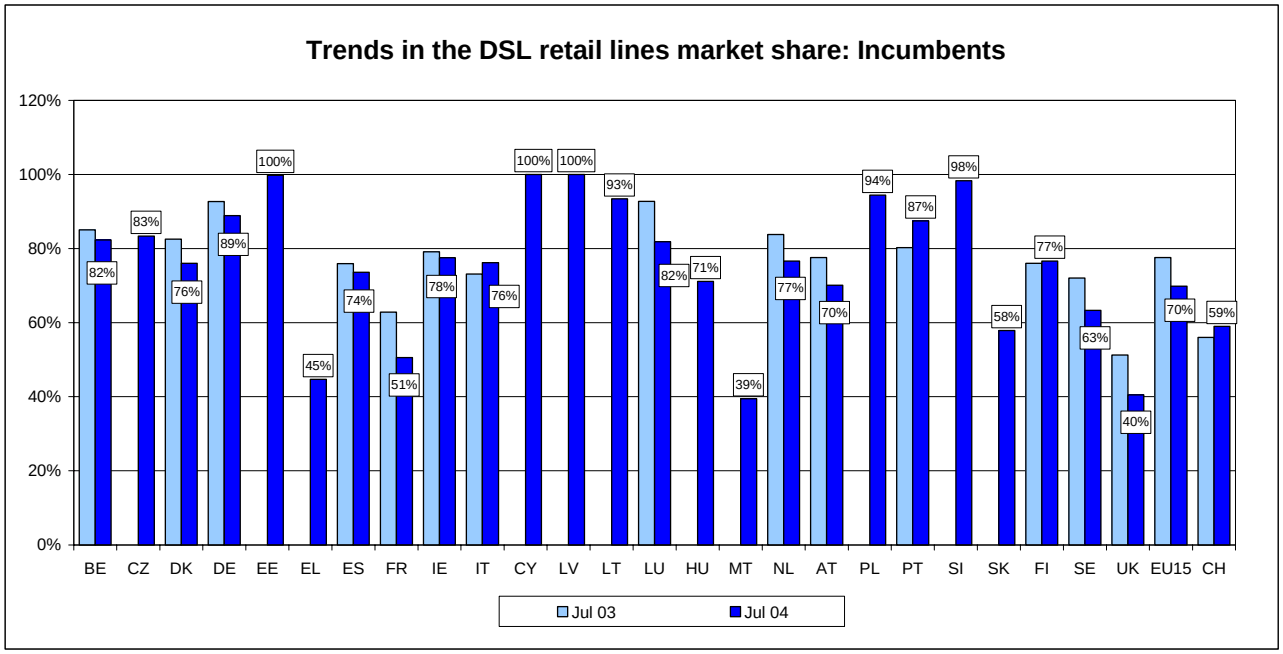


Source for Switzerland: Swisscom; Swisscable.
Note: Leased line, optical fibre, PLC, satellite, WLL, etc. services are not included. Only ADSL and cable modem services are taken into account.

With regard to the trend in the number of DSL lines sold by incumbent operators in the same period, there has been a reduction of 8 percentage points on average, from 78% in July 2003 to 70% in July 2004. With the exception of Greece, Italy, Portugal and Switzerland, incumbent operators have lost market share in all other Member States. The most significant reductions occurred in France, the United Kingdom, Luxembourg and Sweden.

Between the two periods observed, the subsidiary of the Swiss historic operator gained 3 points of market share in the ADSL access segment. This upward trend puts it in the minority of the European Union countries, in which the historic operator or its subsidiary has managed to reverse the trend and consolidate its situation.

Figure 72

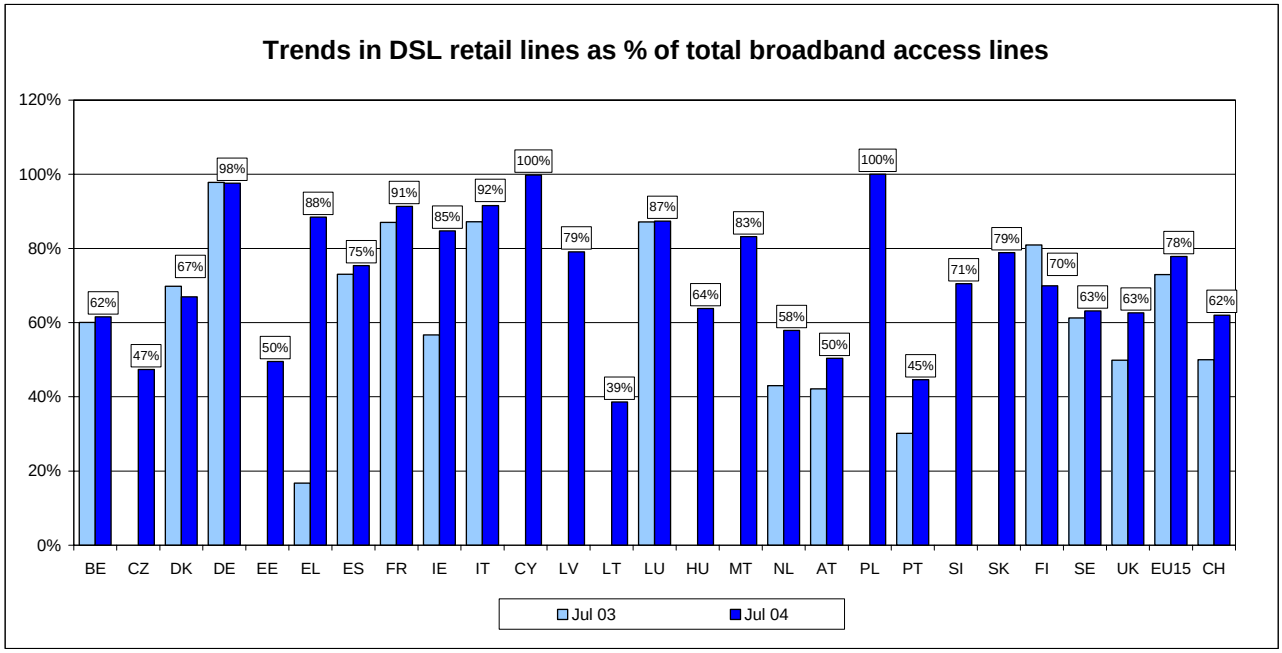


Source for Switzerland: Swisscom; Swisscable.
Note: Leased line, optical fibre, PLC, satellite, WLL, etc. services are not included. Only ADSL and cable modem services are taken into account.

As can be seen from Figure the number of DSL lines has increased in the overall broadband retail market, representing 78% of all broadband lines as against 73% in July 2003. The only exceptions to this general trend are Denmark and Finland.

Like the majority of the European Union countries, Switzerland increased the proportion of the number of DSL connections (ADSL only for Switzerland) compared with the total number of activated broadband connections. This is not at all surprising since in Switzerland the growth enjoyed by ADSL in absolute terms is higher than that of cable modems. In the international comparison, in July 2003 Switzerland was level with the United Kingdom, for which the split between broadband access technologies is very well balanced (approximately 50/50). In July 2004 there was observed approximately the same growth of the ADSL market share in both countries (more than 10 points).

Figure 73

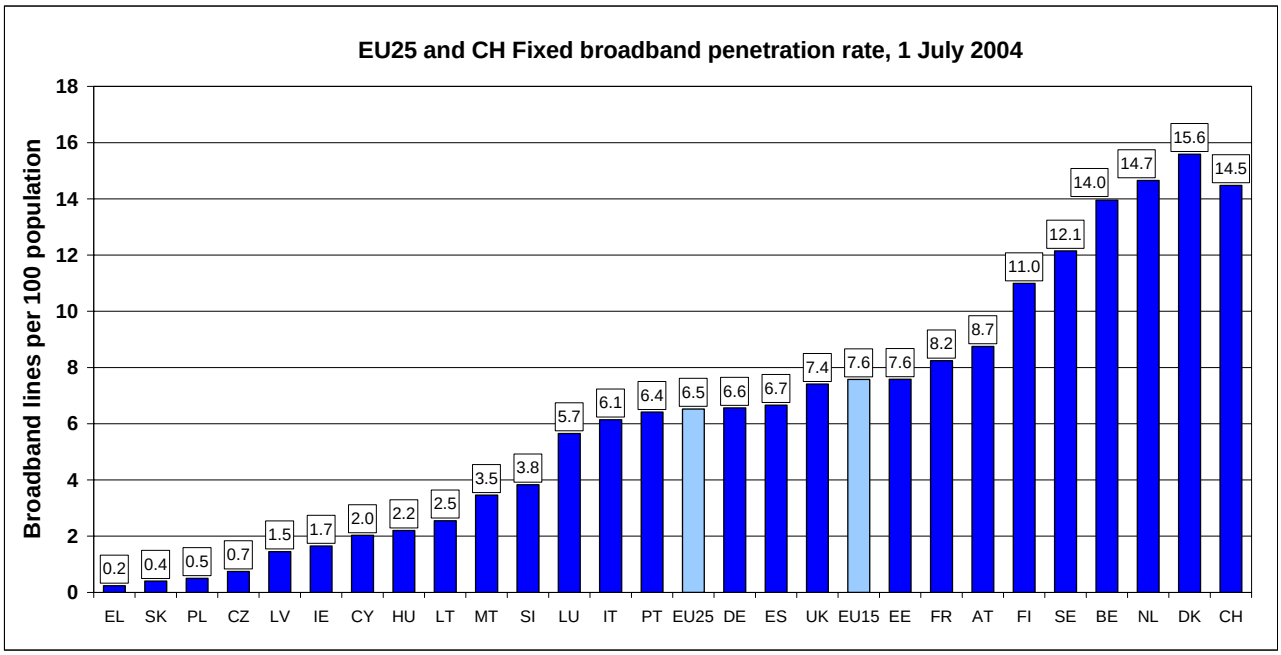


Source for Switzerland: Swisscom; Swisscable.
Note: Leased line, optical fibre, PLC, satellite, WLL, etc. services are not included. Only ADSL and cable modem services are taken into account.

The following chart shows the penetration rate for broadband lines measured as the total number of broadband lines divided by the total population. The broadband penetration rate varies significantly across Member States ranging from 0.2% in Greece to 15.6% in Denmark. The rate of broadband growth over the year for the EU15 Member States is also diverse, ranging from 0.22 percentage points in Greece to 5.21 percentage points in Denmark. In general, the best performing countries continue to have high rates of growth, widening the gap between them and the countries with lowest penetration levels.

In July 2004, the penetration rate of broadband access in Switzerland was one of the highest in Europe. Only Denmark and the Netherlands had higher rates. Nor is it surprising to note that it is primarily the small countries with a low population and a relatively high gross domestic product which are in the lead in terms of broadband penetration.

Figure 74

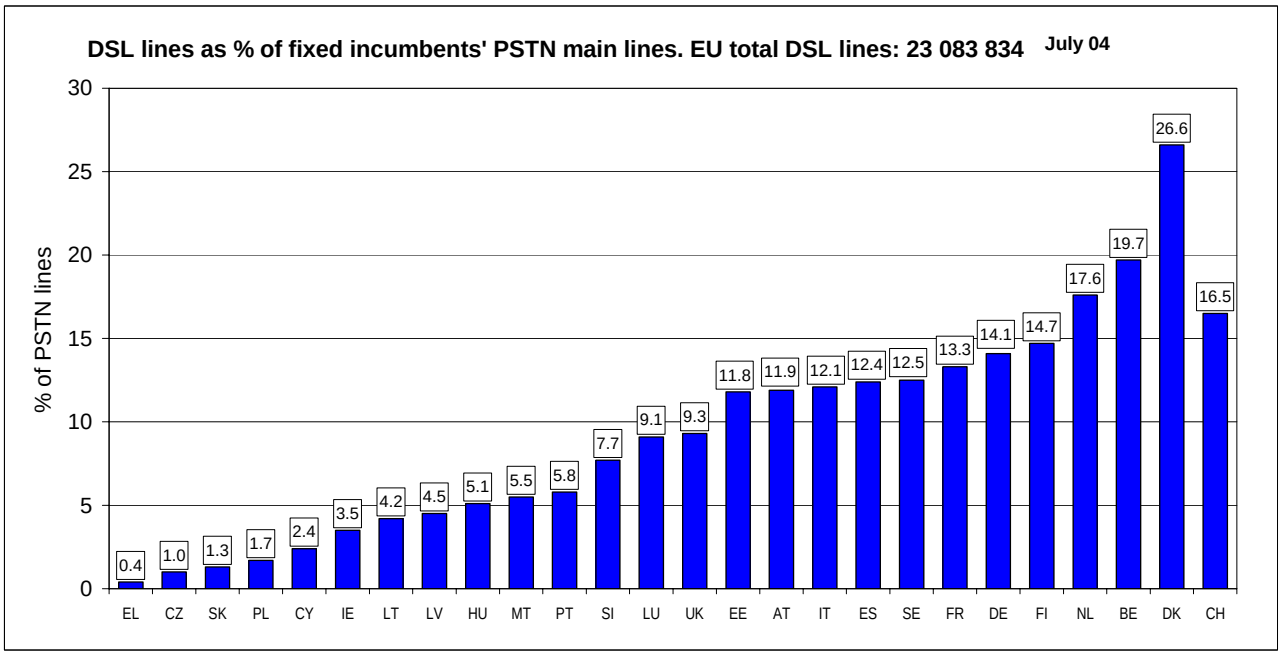


Source for Switzerland: Swisscom; Swisscable.

Figure 5 displays the number of DSL lines per 100 PSTN lines of the fixed incumbent operator. There has been an increase of almost 9 percentage points in the Netherlands and of more than 8 points in Denmark, followed by Italy and France with a 7 point increase each.

The proportion of ADSL connections compared with the number of PSTN main lines puts Switzerland more or less on the top of the league table. Only three countries have a higher penetration rate, i.e. in ascending order, the Netherlands, Belgium and Denmark.

Figure 75



Availability of wholesale access July 04											
		Fully unbundled lines supplied by the incumbent to new entrants			Shared access lines supplied by the incumbent to new entrants			Wholesale DSL lines supplied			
								Bitstream access		Simple resale	
Country	Incumbent's PSTN activated main lines	Unbundled lines	Requested lines	N. of agreements	Shared lines	Requested lines	N. of agreements	No. of lines	No. of agreements	Resale No. of lines	No. of agreements
Belgium	4,504,142	4,750	99	8	2,635	13	8	86,539	10	72,331	25
Denmark	2,112,258	53,602	n.a.	17	26,630	n.a.	5	56,163			
Germany	37,500,000	1,627,846		86	1,141		9				
Greece	5,600,000	932	101	7	160	35		21,845	6		
Spain	16,884,000	40,302	600	9	2,142		9	495,966	30		
France	33,826,000	13,066		13	717,654		14	854,205	5	635,155	n.a.
Ireland	1,590,000	305	4	3	1,195	10	3	10,990	7		
Italy	26,596,000	697,530	906,082	27	158	468	2	750,000	196		
Luxembourg	244,000	2,376	270	3			3			1,651	3
Netherlands	7,800,000	39,625	n.a.	12	281,504	n.a.	12		1		
Austria	2,993,000	45,862	3,300	20	18	n.a.	20	71,300	38		
Portugal	3,994,253	4,845		2				32,525	9		
Finland	2,725,607	96,600	n.a.	n.a.	31,600	n.a.	n.a.	29,500	n.a.	n.a.	n.a.
Sweden	5,500,000	10,972	n.a.	110	87,795	n.a.	110	3,200	26	150,000	n.a.
United Kingdom	29,600,000	7,466	85	59	5,949	272	12	224,941	28	2,514,705	763
Cyprus	424,104	n.a.	n.a.	n.a.	n	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Czech Republic	3,516,860	10,035	n.a.	2	10,247	n.a.	2			n.a.	
Estonia	432,000	2,652	2,652	7						n.a.	4
Hungary	3,600,000							41,064	18		
Latvia	600,000									1,500	11
Lithuania	817,825							2,249	17		
Malta	206,286									6,915	15
Poland	11,117,504										
Slovakia	1,200,000										
Slovenia	700,000					2,638		911	4		
EU15	181,469,260	2 646 079	910541	376	1 158 581	798	207	2 637 174	356	3373842	791
EU10	22,614,579	12,687	2,652	9	10,247	2,638	2	44,224	39	8,415	30
EU25	204,083,839	2,658,766	913,193	385	1,168,828	3,436	209	2,681,398	395	3,382,257	821
Switzerland	**3,983,000**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**267000**	**28**

BROADBAND RETAIL LINES, JULY 2004

July 04		New entrants' DSL lines on PSTN July 04					Incumbents' access lines by other means									New entrants' access lines by other means								
	Incumbent's DSL lines	Full ULL	Shared access	Bitstream access	Resale	Total	WLL	Cable modem	Leased lines	3G	Fiber to the home	Satellite	PLC	Other	Total	WLL	Cable modem	Leased lines	3G	Fiber to the home	Satellite	PLC	Other	Total
BE	731 809	2 849	2 309	80 511	71 816	157485	0	0	16	0	0	0	0	0	16	7	553584	1734	0	0	0	0	38	555363
CZ	30000	0	0	0	6000	6000	0	0	n.a.	0	n.a.	0	0	0	0	n.a.	40000	n.a.	0	n.a.	n.a.	n.a.	n.a.	40000
DK	427 322	49 884	28 118	56 788		134790	0	106532	3804	0	0	0	0	1685	112021	3019	143367	5152	50359	0	0	0	13479	165017
DE	4 700 000	585 000	1 141			586141	0	0	n.a.	n.a.	n.a.	4906	0	0	4906	n.a.	70000	n.a.	n.a.	n.a.	45000	9200	n.a.	124200
EE	50780	51	0	0	75	126	583	0	191	0	322	0	0	0	1096	1735	36888	0	0	2207	0	0	9939	50769
EL	10 245	932	160	11 600		12692	0	0	0	0	0	0	0	0	0	532	0	2457	0	5	0	0	0	2994
ES	1 535 179	40 302	2 142	508 549		550993	214	0	n.a.	0	0	755	0	0	969	6979	660881	7979	0	1367	224	1888	1168	680486
FR	2 270 407	13 066	717 654	854 205	635 155	2220080	n.a.	87793	n.a.	0	0	0	0	n.a.	87793	n.a.	337207	n.a.	0	0	0	0	n.a.	337207
IE	43 060	305	1 195	10 990		12490	n.a.	0	2300	n.a.	n.a.	n.a.	n.a.	n.a.	2300	1400	5200	900	n.a.	n.a.	220	n.a.	n.a.	7720
IT	2 455 802	291 762		474 911	713	767386	0	0	1046	0	44	18700	0	289	20079	305	20	3881	922814	171024	101300	0	0	276530
CY	14490	0	0	0	0	0	0	0	30	0	0	0	n.a.	n.a.	30	0	0	0	0	0	0	n.a.	n.a.	0
LV	26815	0	0	0	0	0	255	357	0	0	0	0	0	0	612	351	1746	59	0	32	0	0	4289	6477
LT	31825	0	0	2249	0	2249	0	0	125	0	36	0	0	0	161	5997	23404	1384	0	3750	1	59	19449	54044
LU	18 101	2 376			1 651	4027	373	156	0	0	0	0	0	0	529	25	2623	10	0	0	0	0	19	2677
HU	101197	0	0	41064	0	41064	893	9138	n.a.	0	n.a.	n.a.	0	n.a.	10031	5435	64252	n.a.	0	1000	n.a.	0	n.a.	70687
MT	4511	0	0	0	6915	6915	0	0	0	0	0	0	0	0	0	0	2312	0	0	0	0	0	0	2312
NL	1 053 000	39 625	281 504			321129	0	0	n.a.	0	n.a.	n.a.	0	0	0	n.y.a.	998400	n.a.	0	n.a.	n.a.	n.a.	n.a.	998400
AT	249 400	35 007	18	71 300		106325	0	0	n.a.	n.a.	0	0	0	0	0	0	350000	n.a.	0	0	0	0	n.a.	350000
PL	181501	0	0	0	10806	10806	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PT	260 341	4 290		33 093		37383	n.a.	268799	1282	0	n.a.	0	0	0	270081	797	97340	1294	n.a.	0	286	0	28	99745
SI	52929	0	0	911	0	911	0	1064	0	0	243	0	0	0	1307	150	20242	0	0	745	0	0	55	21192
SK	9900	0	0	0	7200	7200	0	0	0	0	0	0	0	0	0	785	3800	n.a.	0	0	n.a.	0	0	4585
FI	306 600	47 050	16 850	29 500		93400	0	50200	0	0	0	0	0	55000	105200	5100	47000	0	0	100	0	1000	13700	66900
SE	434 000	10 972	87 795	3 200	150 000	251967	n.a.	0	5000	n.a.	n.a.	n.a.	n.a.	n.a.	5000	5200	205000	n.a.	20000	184000	600	400	n.a.	395200
UK	1 114 974	7 466	5 949	224 941	1 399 731	1638087	0	0	n.a.	0	0	2500	0	0	2500	2500	1634000	n.a.	0	0	3500	0	0	1640000
EU15	15 610 240	1130886	1144835	2359588	2259066	6 894 375	587	513480	13448	0	44	26861	0	56974	611 394	25864	5104622	23407	0	356496	151130	12488	28432	5 702 439
EU10	503 948	51		44 224	30 996	75 271	1 731	10 559	346		601				13 237	14 453	192 644	1 443		7 734	1	59	33 732	250 066
EU25	16 114 188	1 130 937	1 144 835	2 403 812	2 290 062	6 969 646	2 318	524 039	13 794		645	26 861		56 974	624 631	40 317	5 297 266	24 850		364 230	151 131	12 547	62 164	5 952 505
CH	**389 000**	**0**	**0**	**0**	**267 000**	**267 000**	**n.a.**	**0**	**n.a.**	**0**	**n.a.**	**n.a.**	**n.a.**	**n.a.**	**0**	**n.a.**	**410 000**	**n.a.**	**0**	**n.a.**	**n.a.**	**n.a.**	**n.a.**	**410 000**

Malta: On 15/10/04 ISPs decided to double the speed of the connections below 144KB/s, which are not included in this table. As a result of this upgrading there are now about 30,000 broadband lines, out of which, 13,500 are by means of cable modem.
Data for Hungary refer to the first quarter of 2004.
The number of lines in the Czech Republic is understated since it refers to lines above 264 Kbit/s only and the number of users of WLL and LANs/WANs is not included
Data for Poland do not include cable modem lines.

7.4.PRICES FOR UNBUNDLED LOCAL LOOP

This section shows the charges for connection and the monthly rental per unbundled loop for both full unbundled access and shared access to the loop.

Estimates of the total average monthly cost are calculated on the basis of the price of the monthly rental + 1/12 of the connection fee.

Price excludes co-location costs.

It is assumed that the loop is active and will be used to provide DSL services.

Charges in some Member States are different in the case of subsequent access.

In Switzerland, fully unbundled access and shared access, as well as bitstream access, have not yet been concretely implemented. For this reason, Switzerland will not be included in the comparisons made in this part of the document.

7.4.1. Prices for full unbundled local loop

LLU is not available in Malta, Poland and Slovakia.

Belgium: Monthly rental for a Type 2 connection, i.e. Type 1 usage + HF data: ADSL, SDSL, xDSL. Connection fee: Type 1 "active loop". For a non-active loop the connection fee is 60.41. A supplementary fee of 16.30 for disconnection is also charged.

Czech Republic**:** Price in the RUO. Operators have challenged these prices. A decision by the NRA on the price dispute is expected.

Denmark**:** An additional DKK 514 is paid if there is no existing cable termination point.

Germany: Price valid until 31.03.2005.

Spain: Additional wiring within premises is invoiced separately.

Ireland: This connection charge applies where there is an existing metallic path. The monthly rental charge is currently being reviewed.

Italy: The ULL connection fee was 42.00 € from 01/01/04 to 16/06/04. It includes POTS and ADSL.

Cyprus: The incumbent operator has published its RUO. OCTPR will review this and issue its ruling. No OLO has yet negotiated an agreement

Latvia: A single fee of Latvia L 27.08 is charged for the technical expertise in connection (included in the figure).

Hungary: Matáv charges 37644 HUF (included in the figure) to check whether the line is suitable for unbundling.

Finland: Weighted average of 41 SMP operators providing ULL. Prices vary between 7.9 and 22.1 € for the monthly rental and between 84 and 220 € for the connection.

Sweden: Orders placed and delivered at the same time at the same termination address: 1540 SEK for the first access, 790 SEK for additional accesses.

Figure 76

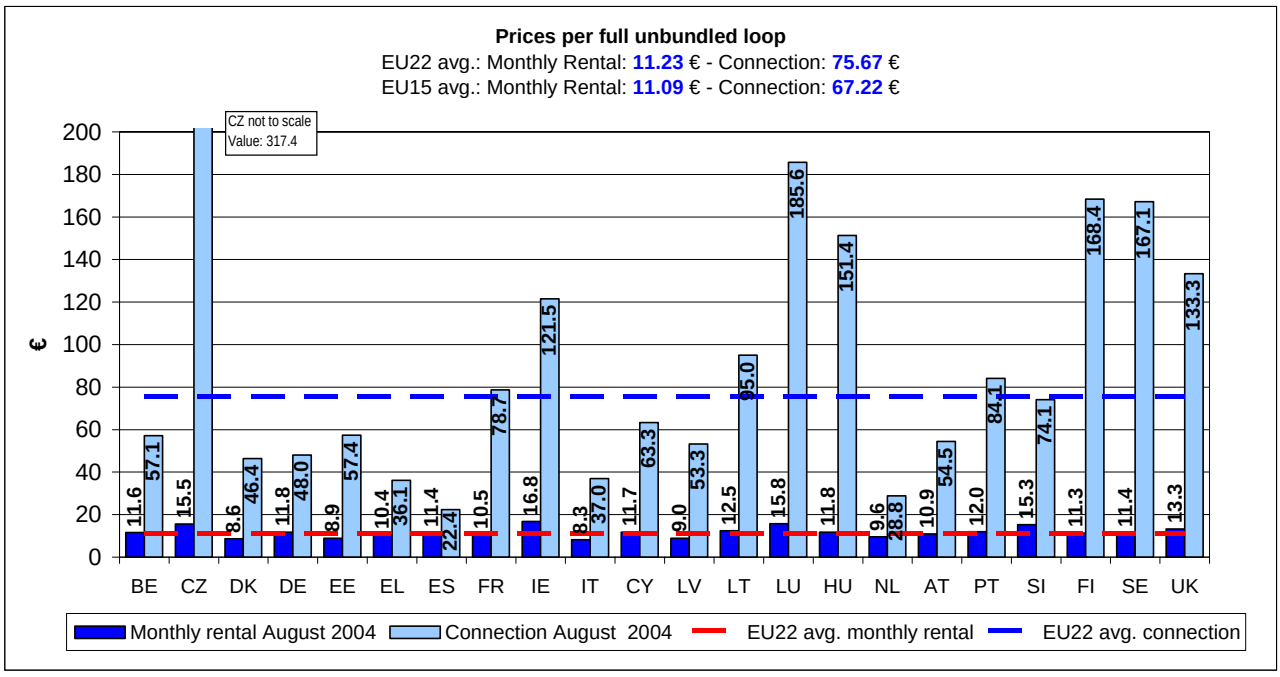
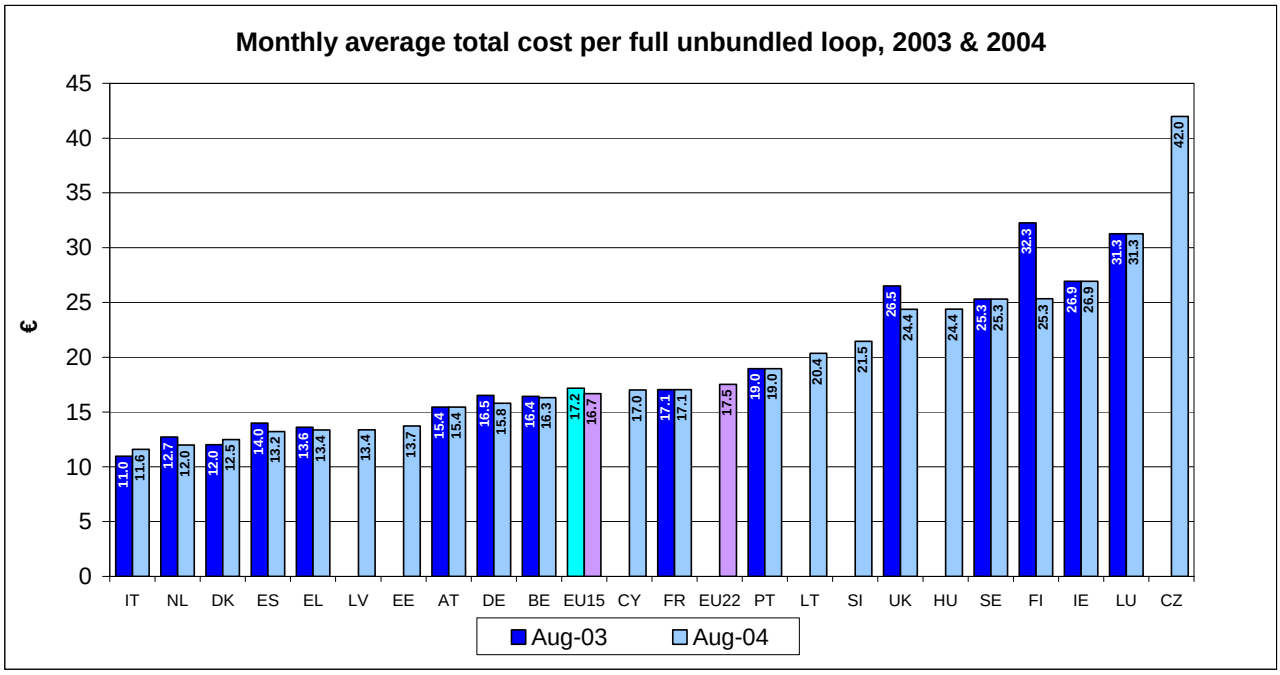


Figure 77



Estimates are based on the total cost for the loop for the first year.

7.4.2. Prices for shared access local loop

SA is not available in Estonia, Cyprus, Malta, Poland and Slovakia.

Belgium: The price is quoted exclusive of the splitter (€ 131/year for 48 splitters). A supplementary fee of €28.33for disconnection is also charged.

Czech Republic: Price in the RUO. Operators have challenged these prices. A decision by the NRA on the price dispute is expected.

Denmark: An additional DKK 514 is paid if there is no existing cable termination point. The price does not include a splitter.

Germany: Price valid until 31.03.2005.

Spain: Additional wiring within premises is invoiced separately. Price is exclusive of splitter. An additional € 32.10 for POTS splitter and € 83.33 for RDSI splitter is charged if required.

France: Monthly rental price includes the price of the splitter.

Ireland: This connection charge applies where there is an existing metallic path. Price exclusive of splitter. The monthly rental charge is currently being reviewed.

Italy: The connection fee was 58,40 € from 01/01/04 to 16/06/04

Cyprus: The incumbent operator has published its RUO. No OLOs have negotiated an agreement yet.

Latvia: A single fee of Latvia L 27.08 is charged for the technical expertise in connection (included in the figure).

Luxembourg: Price of the splitter not included.

Hungary: Matáv charges 37644 HUF (included in the figure) to check whether the line is suitable for unbundling.

Slovenia: Price includes cost of splitter

Finland: Weighted average of 41 SMP operators providing ULL. Generally the monthly rental is 50% of the monthly rental of full ULL. Prices for the connection fee vary between 47 and 252 €.

Sweden: Orders placed and delivered at the same time at the same termination address: 1100 SEK for the first access, 790 SEK for accesses 2 to 20, 650 SEK for additional accesses.

Figure 78

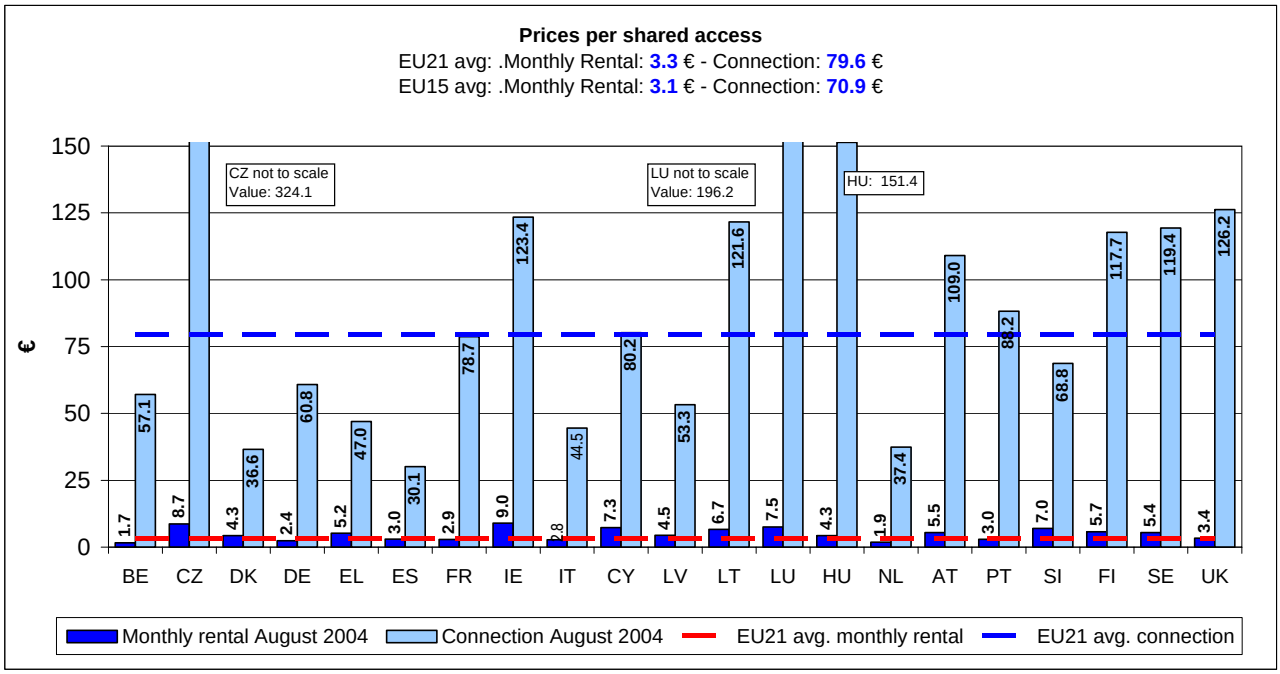
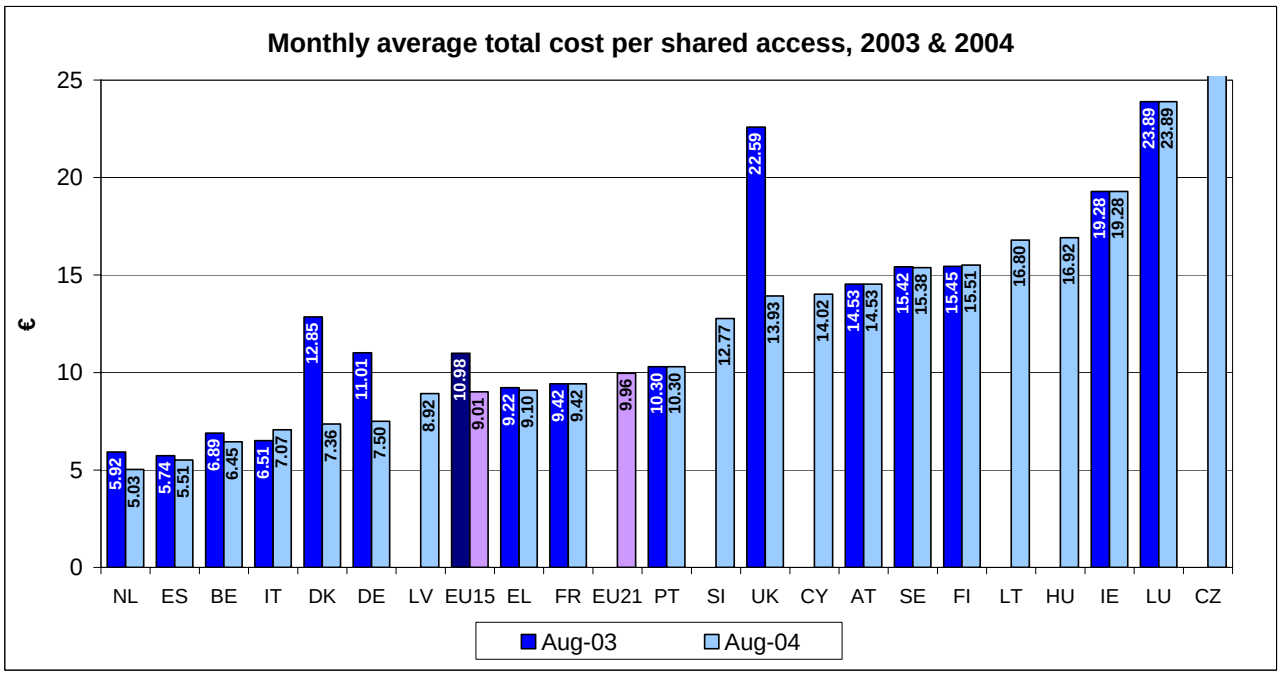


Figure 79



Estimates are based on the total cost for the loop for the first year.

8 PUBLIC VOICE TELEPHONY TARIFFS

This section examines the charging system, the line rental charges and the main tariffs for public fixed voice telephony charged by the incumbent operators in each Member State in August 2004. The price trend over the past five years is also analysed.

The incumbent operators are: Belgacom for Belgium, Cesky Telecom for Czech Republic, TDC for Denmark, Deutsche Telekom for Germany, Elion for Estonia, OTE for Greece, Telefonica for Spain, France Telecom for France, Eircom for Ireland, Telecom Italia for Italy, CYTA for Cyprus, Lattelekom for Latvia, Lietuvos Telekomas for Lithuania, P&T Luxembourg for Luxembourg, Matav for Hungary, Maltacom for Malta, KPN for the Netherlands, Telekom Austria for Austria, Polish Telecom for Poland, Portugal Telecom for Portugal, Telekom Slovnije for Slovenia, Slovak Telecom for Slovakia, TeliaSonera for Finland (formerly Sonera), TeliaSonera for Sweden (formerly Telia), and British Telecom for the United Kingdom. In Switzerland, the historic operator considered is, of course, Swisscom. It has to be noted that Swisscom applies a unit-based charging system (CHF 0.10 for x seconds).

The incumbent operators still retain a large market share, but new entrants are increasingly gaining market share by offering cheaper prices for certain types of calls (usually long-distance or international) or destination. The prices charged by incumbents do not necessarily, therefore, represent the lowest prices available. A comparison between the rates charged by incumbents and alternative operators for a sample of countries is also shown.

The figures and information are taken from a study carried out for the Commission by Teligen-HI Europe. The data are collected from primary sources (i.e. directly from the incumbent operators).

NRAs were given the possibility to check these data before finalising this report. All NRAs, with the exception of Cyprus, Spain and Luxembourg, provided comments and endorsed these data.

Different sets of charges for fixed national voice telephony services are shown in the following sections:

- the minimum costs for different types of calls (local, long-distance, international calls and calls towards mobile networks), depending on the charging system adopted;

- the monthly rental charged by incumbent operators;

- the charges for a composite basket of calls (local, long-distance, international fixed calls and calls to mobile), that gives an estimate of the average monthly spending by a typical "European business/residential user" for the whole range (national and international) of calls;

- the charges for a basket of national calls, that gives an estimate of the average monthly spending by a typical "European business/residential user" for fixed national calls;

- the basket of international calls for each country that indicates the average price of a single call from the originating country to all other OECD destinations. In addition, the price of individual calls to specific destinations is also shown.

- the price of some individual calls (3- and 10-minute local, long-distance and international calls) at peak time, inclusive of any initial charge. For incumbents which apply unit-based charging, the price of a whole unit is calculated.

For the various types of calls, a benchmark based on a comparison with US and Japan is also included. For the USA, the prices for national calls are those charged by Verizon (in New York city) and the prices for international calls are those charged by AT&T. For Japan, the national call prices are those charged by NTT and the international call prices are those charged by KDD.

The EU average tariffs shown in the charts are weighted average (by population of the Member States).

8.1. CHARGING SYSTEM

The billing system for public voice telephony services usually comprises two components: an initial charge applied at the beginning of a call and a charge for the remainder of the call (that may not depend on the type of initial charge used).

8.1.1. Initial charges

There are different types of charges applied at the beginning of a call, either alone or in combination. The charging method used for the remainder of the call may not depend on the type of initial charge used. The types of charges are:

- Call set-up charge raised at the start of the call (when the call is answered). This charge does not offer any call time. Per second or per unit charges apply from the beginning of the call.
- Initial charge that is used in the same way as call set-up, but in addition includes a certain number of seconds call time before normal time-based charging starts.

- The unit charge in effect works the same way as the initial charge: A full unit is charged at the beginning of the call, providing a certain number of seconds call time until the next unit is charged. Depending on the principle used by the operator (synchronous/ asynchronous) the number of seconds call time in the first unit may be less than the specified unit duration.
- Minimum charging is normally used with per second billing, to ensure the operator obtains minimum revenue per call. If the call duration is short, the actual call charge may be less than the minimum charge. In such cases the minimum charge will be applied.

In the calculation of the minimum charge for calls using per second billing the first second of the calls (after it is answered) is not included, even though this can also be perceived as part of the minimum cost.

8.1.2. Charging system during the call

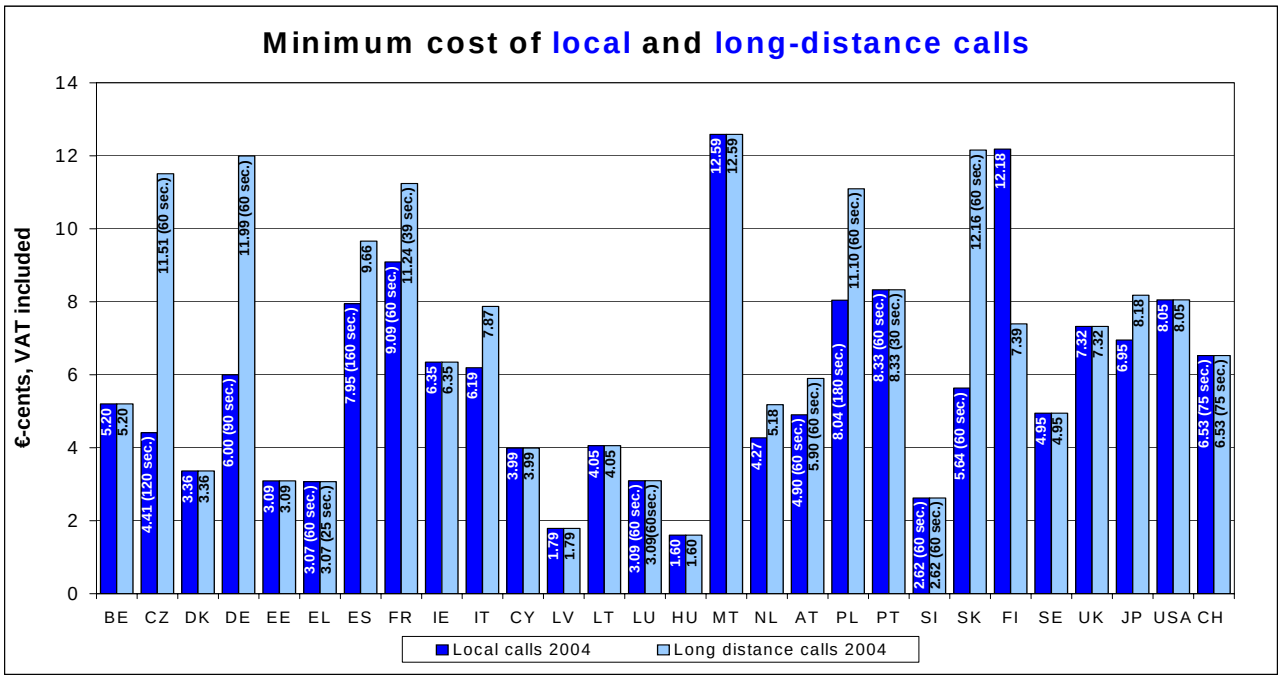
There are, in principle, 3 ways of charging calls. The fact that most operators tend to publish the duration charges on a per minute basis does not itself indicate which system is used. The 3 principles are:

1. Real time charging (also known as "per second billing") allows the cost of the call to be calculated to the exact duration of the call (normally nearest second). A call set-up charge, initial charge or minimum charge may be applied to this structure, in addition to the duration charge.
2. Unit based charging uses a fixed price unit. The duration of this unit will vary with the destination of the call and time of day. Call duration will always be raised to a multiple of whole units, so the user will nearly always pay for more time than is used. A call set-up charge may be applied to this structure, but is relatively rare.
3. Fixed period charging uses a variable price, but fixed duration unit. The call is normally charged on a per minute basis, or per 6 seconds. The price for the period will vary with destination and time of day. The charged duration of the call will be raised to a multiple of whole periods. A call set-up charge or initial charge is often implemented in the form of a higher charge for the first minute or period. This initial charge may vary with destination and time of day.

Call set-up charges may vary according to the type of call (local, long-distance, international, calls to mobile), and for international calls according to destination. In the case of international calls, the minimum cost of a call may change according to the destination.

The following charts show the minimum cost, due to initial charges, for local, long-distance and international calls and calls to mobile charged by the incumbent operators. The free call time (i.e. the number of seconds of call time before normal time-based charging starts) is shown in brackets. Values are expressed in €, including VAT. It should be noted that while some operators apply identical set-up charges to local and long-distance calls, the free call times can vary.

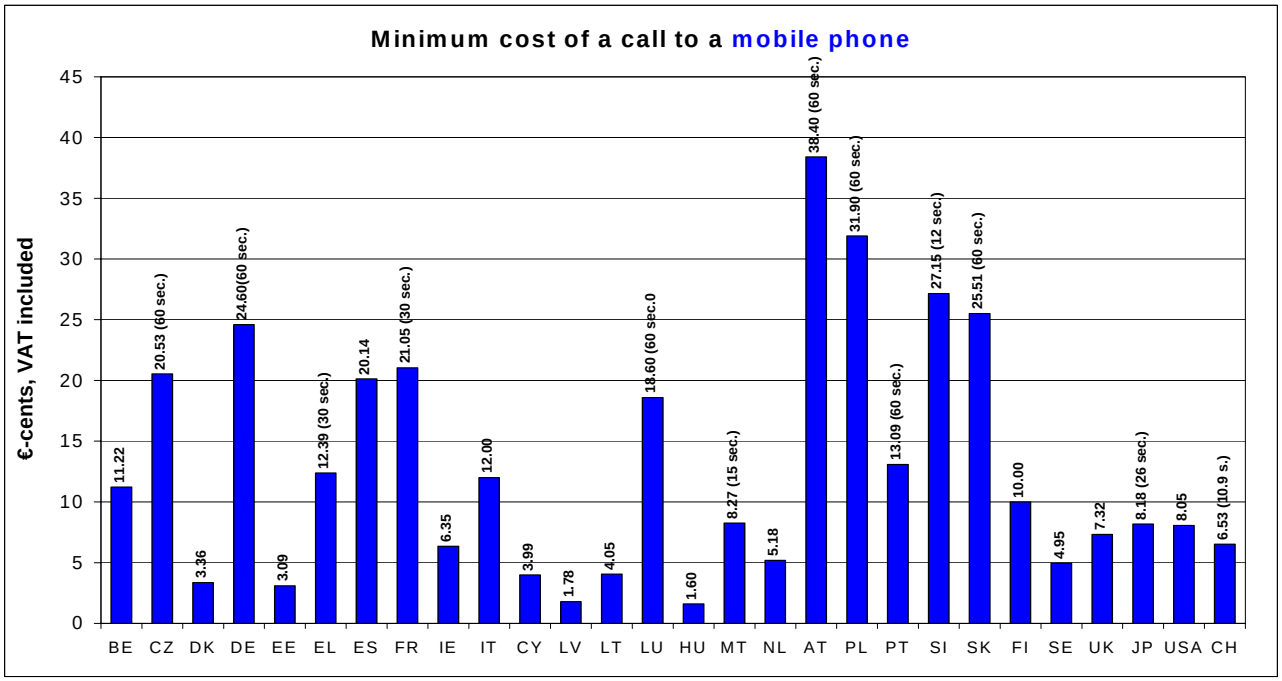
Figure 80



There is no difference for the minimum cost of a local and a long-distance call in Belgium, Cyprus, Denmark, Estonia, Hungary, Ireland, Latvia, Lithuania, Slovenia, Sweden, United Kingdom and US.

Source for Switzerland: OFCOM Switzerland.

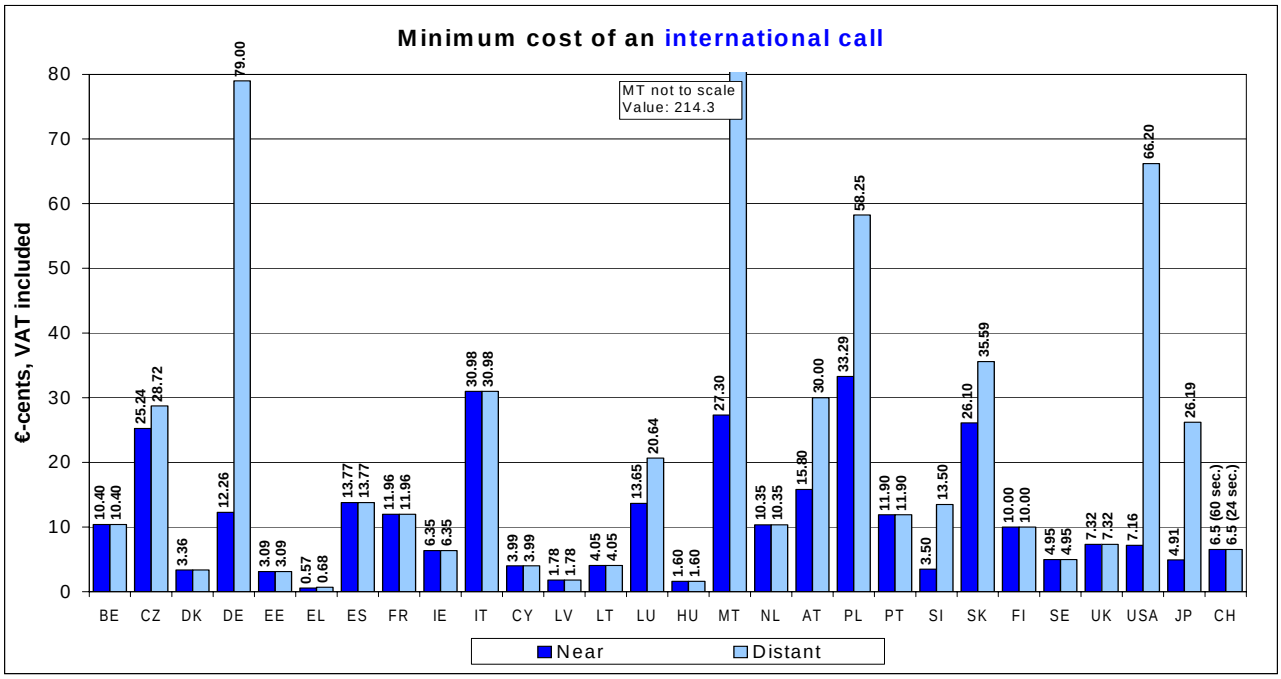
Figure 81



Source for Switzerland: OFCOM Switzerland.

Initial charges for international calls will normally follow similar rules as for national calls. In the case of Greece no minimum or call setup charges are reported by the operator and the prices shown refer to the 1st second. Where unit based charging is used the initial period duration covered by the first unit may change with the destination. In most countries prices are the same for business and residential customers. Differences may occur in Austria, France, the UK and USA.

Figure 82



Source for Switzerland: OFCOM Switzerland.
Note: the maximum amount (as well as the seconds referring to it) corresponds to the highest amount for a call to a European country.

8.2. MONTHLY RENTAL CHARGED BY THE INCUMBENT OPERATORS

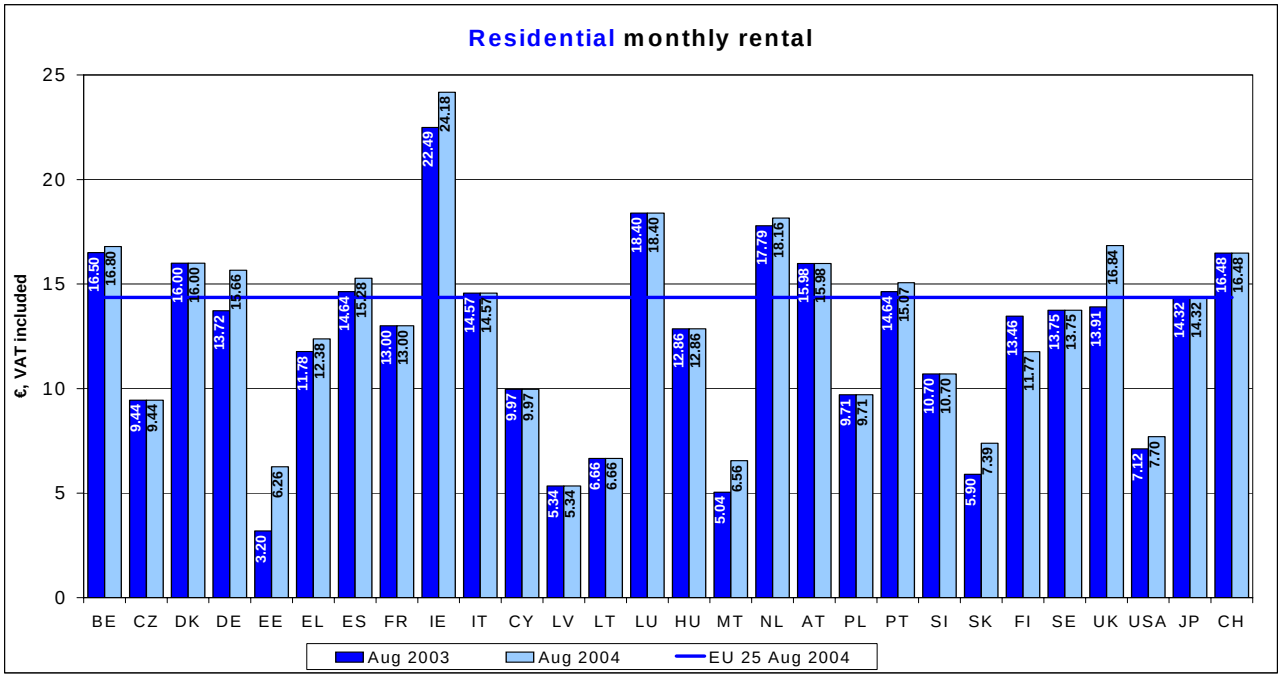
The following charts show the incumbent's monthly line rental charges for residential and business users in August 2004 and the variation in nominal terms in each country since August 1998. In order to reflect the real charges actually paid by users, values are expressed in €, including VAT for residential users and excluding VAT for business users.

In Italy, Sweden, the UK, USA and Japan the rental charges are different for business and residential customers. In Austria two different packages have been chosen as appropriate for business (Business 1) and residential users (TikTak Privat), hence different packages. In the UK the residential package changed in 2004, after BT abandoned the Residential Standard Tariff. The "BT Together Option 1" tariff is used. In Finland and Japan the monthly rental will depend on where in the country the line is connected. The charges shown are for the capital/most densely populated area.

In Switzerland, the monthly charge for an analogue connection (EconomyLine) is CHF 25.25, including 7.6% VAT, which corresponds to 16.48 €. In 2004, the price charged in Switzerland exceeded the weighted European average by 2.12 €. In only five countries is the monthly charge higher – in ascending order: Belgium, UK, the Netherlands, and Luxembourg and, finally, Ireland at the top with 24.18 €.

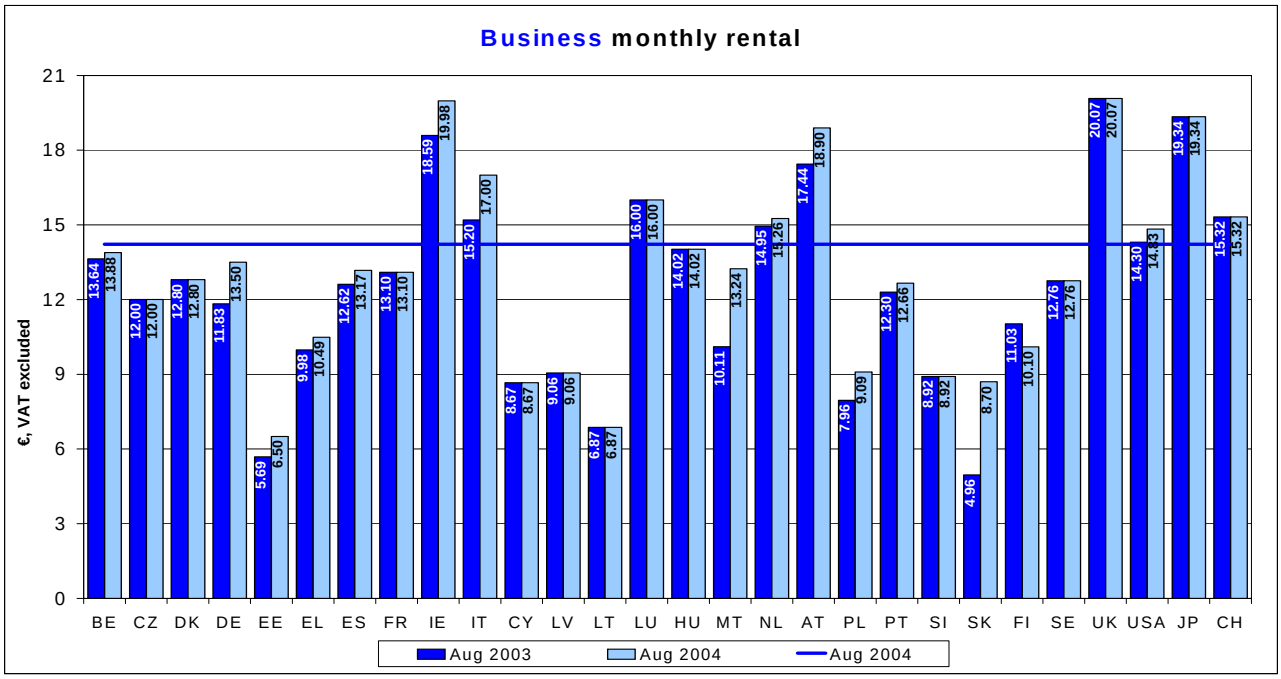
With regard to the price of an analogue business line, exclusive of VAT, Switzerland is hardly any better placed in the international comparison, since the price charged, 15.32 €, exceeds by 1.10 € the weighted average of the 25 Union countries. Only Italy, Luxembourg, Austria, Ireland and the United Kingdom are worse placed.

Figure 83



Source for Switzerland: OFCOM Switzerland.

Figure 84



Source for Switzerland: OFCOM Switzerland.

The following charts show the EU weighted average variation in nominal terms of the residential and business monthly line rental charge. Averages for the EU25, EU15 and EU10 are presented.

The same charts have been produced for Switzerland. Since the liberalisation of the telecommunications market, which generally took place in 1998, line prices have gradually increased in the Union countries. This phenomenon is known as tariff re-adjustment. Its origin lies in the fact that lines were subsidised most of the time by revenue from calls. However, what was possible, or even desirable, in a monopoly is no longer so in a market which is supposed to function according to the rules of competition, and it became imperative to adapt prices to reflect actual costs. In Switzerland, this kind of re-adjustment cannot be observed; the only recorded changes were due to increases in VAT (increasing from 6.5% to 7.5% on 1 January 1999 and from 7.5% to 7.6% on 1 January 2001). We note that the absence of increases in Switzerland had the positive effect of closing the gap which separated us from our neighbours.

Figure 85

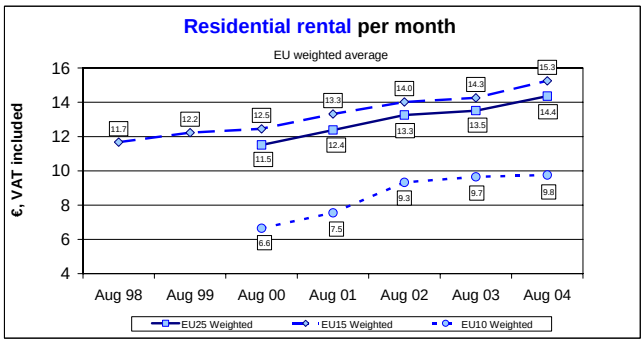


Figure 86

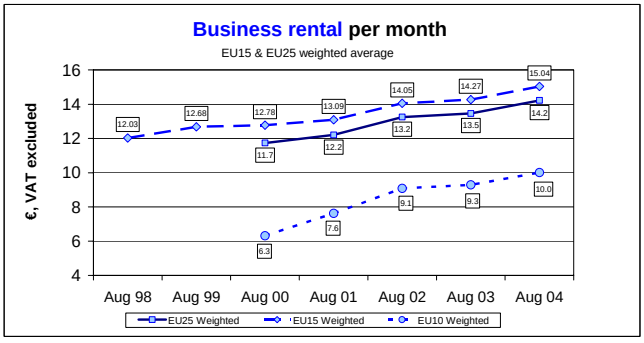


Figure 85a

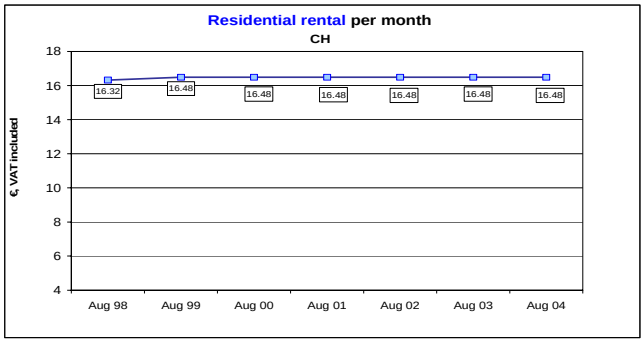
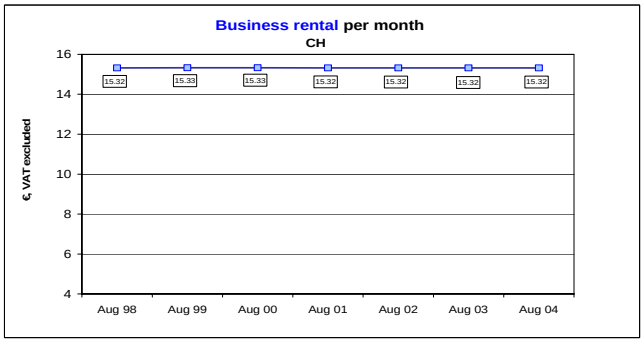


Figure 86a



Source for Switzerland: OFCOM Switzerland.

8.3. AVERAGE MONTHLY EXPENDITURE (COMPOSITE CALL BASKET)

The figures presented in this section are intended to provide an estimate of the average monthly expenditure of a "standard" European consumer (business and residential). The Basket Methodology for Telecommunications Cost Comparison has been devised by the OECD and accepted in most countries as the most stable and neutral method of comparison.

A full description of the methodology can be found in "Performance indicators for public telecommunications operators", ICCP Series No.2.2, OECD 1990.

The user is assumed to have a contract for the provision of voice telephony services with the incumbent operator, and to use only this operator for all types of calls (local, long-distance, international, calls to mobile). Since consumers are making increasing use of call-by-call carrier selection, in particular for specific highly discounted types of calls (i.e. international and long-distance), the figures given below are purely indicative, and do not necessarily reflect the cheapest solution available.

The charts below show the average monthly expenditure for standard residential and business users as of August 2004, expressed in €, based on the standard tariffs charged by the incumbent operators (i.e. excluding any discount packages). This means that lower costs can be achieved if the user subscribes to one or more discounted packages.

The basket of calls used to estimate average monthly expenditure is the new "composite OECD basket" which includes not only fixed national calls (as did the old basket), but also fixed international calls and calls to mobile networks. The revised OECD baskets were adopted in May 2000.

The OECD residential/business baskets are defined as follows (on an annual basis):

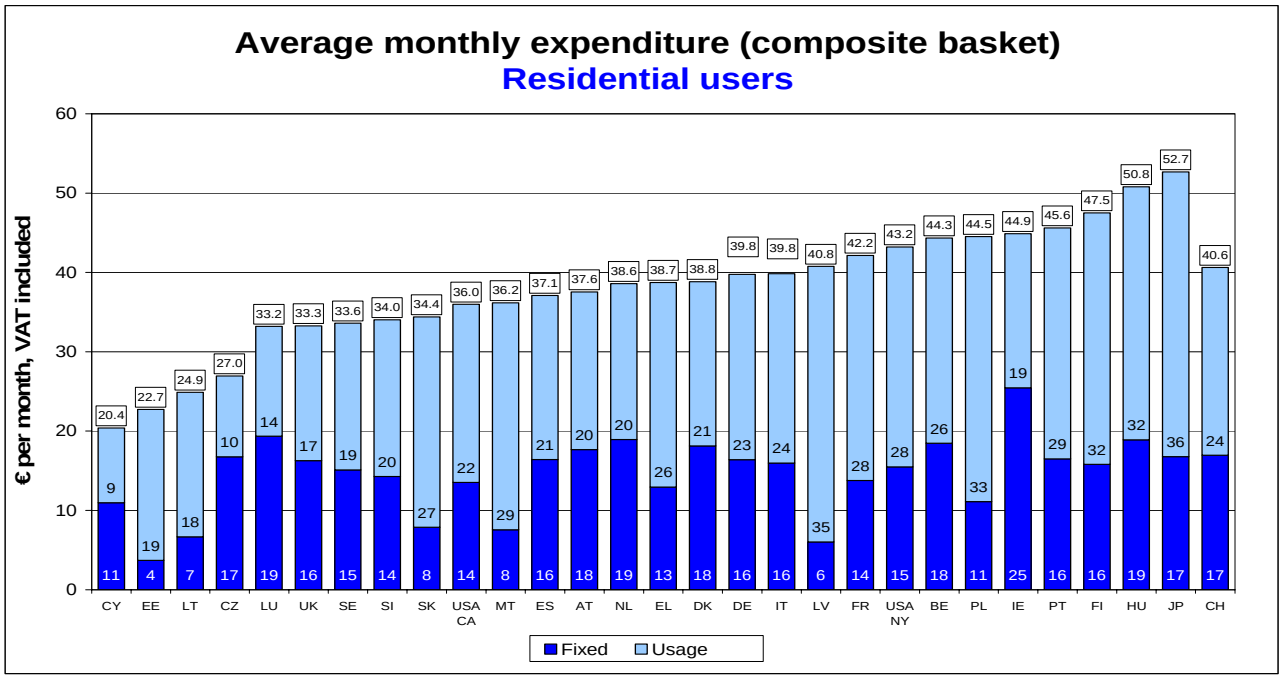
The fixed (i.e. non-recurring) charges include the annual line rental charge plus the charge for the installation of a new line (depreciated over 5 years). Fixed charges for residential users include VAT, while for business users VAT is excluded.

The usage charge for residential users refers to a basket of 1.200 national calls to fixed lines, plus 120 calls (with an average duration of 2 minutes) to mobile networks (Representing 10% of the number of calls to fixed lines), plus 72 international calls (Representing 6% of the number of calls to fixed lines). The usage charges for national calls to fixed lines are calculated with a weighted distribution over 14 distances from 3 to 490 km, at representative times of day (4 calls during the week and 2 during the weekend). The call duration varies from 2.5 to 7 minutes, depending on time and distance. The usage for residential users is weighted towards off-peak hours, and with typically long calls. Only 36% of the calls are within normal business hours; 64% are for distances below 10 km; 9% are for distances above 100 km.

The usage charge for business users refers to a basket of 3 600 national calls to fixed lines plus 360 calls (with an average call duration of 2 minutes) to mobile networks, plus 216 international calls. The usage charges for national calls to fixed lines are calculated with a weighted distribution over 14 distances from 3 to 490 km, at representative times of day (4 calls during the week and 2 during the weekend), and with a call duration of 3.5 minutes regardless of time of day and distance. The usage for business users is weighted towards business hours, and with typically short calls. Over 86% of the calls are within normal business hours; 64% are for distances below 10km; 12.5% are for distances above 100 km.

A full description of the methodology can be found at the end of this report.

Figure 87

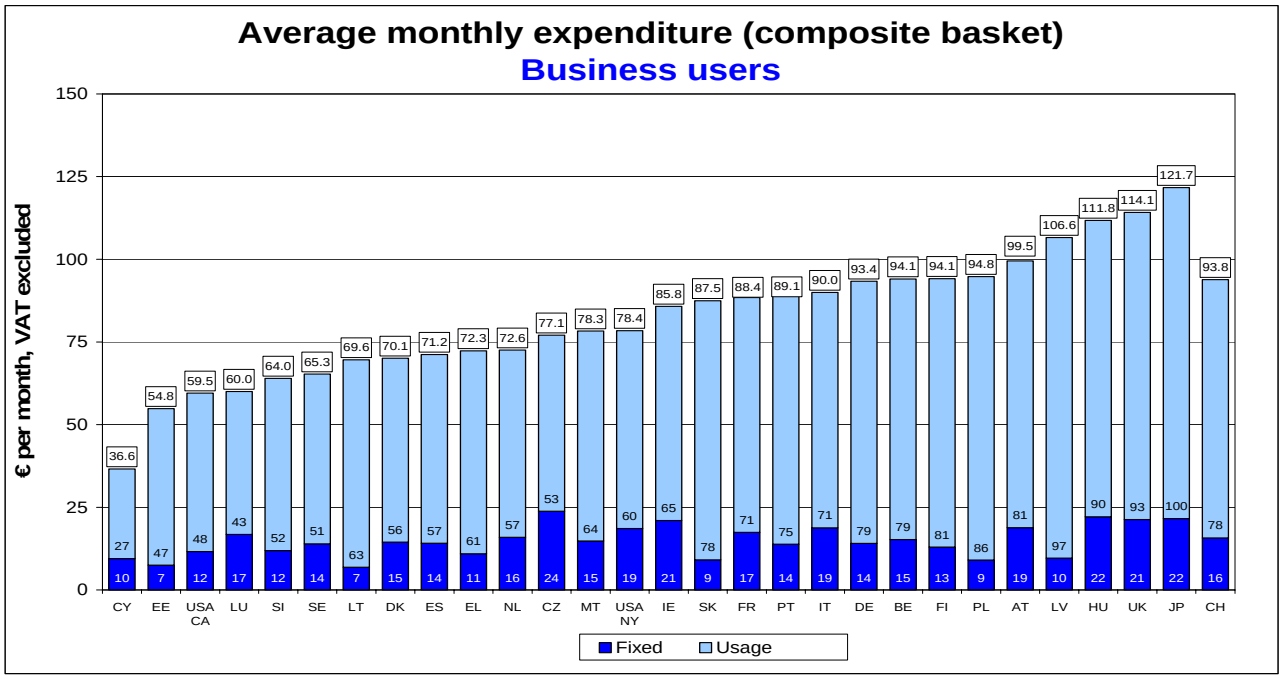


Source for Switzerland: Teligen T-Basket; OFCOM Switzerland computation.

On the basis of the basket established by Teligen, we find that a Swiss residential user pays about 41 € per month for a standard range of services. In eight European countries, the cost of the basket is higher – in ascending order: Latvia, France, Belgium, Poland, Ireland, Portugal, Finland and Hungary. We also note that Japan and the USA, the only non-European countries considered, are among the less attractive countries.

The same exercise has been carried out for businesses and the results are displayed in Figure 75. The cost of a standard basket of services in Switzerland is 93.8 €. The United Kingdom and, once again, Japan are at the bottom of the table. One extremely interesting fact is that the results for businesses have a greater spread than those for residential users, the cheapest basket being 36.6 € (Cyprus) and the most expensive 114 € (the United Kingdom); Japan is not included. This seems to indicate extremely diverse practices among different countries in terms of product segmentation. In Switzerland, Swisscom does not really differentiate its fixed network offerings depending on whether it is dealing with a residential customer or a business. If there are any special reductions, these are generally the result of negotiations between the operator and the business and are not analysed here.

Figure 88



Source for Switzerland: Teligen T-Basket; OFCOM Switzerland computation.

8.4. PRICE OF FIXED NATIONAL CALLS BY THE INCUMBENT OPERATOR

8.4.1. Prices charged by the incumbent operators for individual fixed national calls

This section shows the prices charged by the incumbent operators for individual fixed calls (the same call prices apply to business and residential users). Where the incumbent operator uses a unit-based charging system, the price of calls of different duration and/or distances may in some cases be identical, where both calls are charged the same number of units. Any call set-up charges, minimum charges and/or call specific duration allowances have been taken into account.

Prices refer to peak hours (weekdays 11.00) and are expressed in € including VAT. Except where otherwise specified, the figures refer to August 2004.

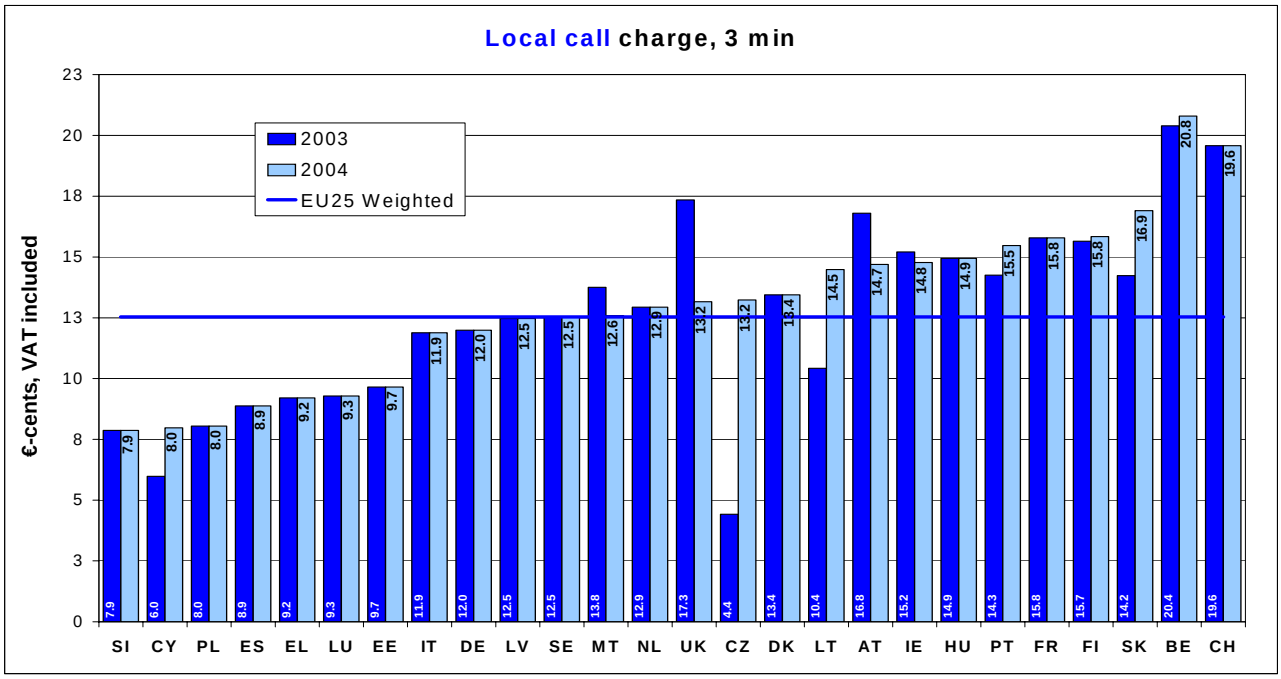
Prices are indicated for three-minute and ten-minute calls over two distances: 3 km (equivalent to a local call) and 200 km (equivalent to a national call). In several countries the tariff changes at exactly one of these distances: in these cases, the rates for the lower distance band are used.

The price of a three-minute call is more affected by the magnitude of the call set-up charge than the price of a ten-minute call.

Where different tariff packages exist, the basic, residential package is selected. Otherwise the standard tariff is used. The “TikTak Privat” Package is used in Austria, “BelBasic” in the Netherlands and “BT Together Option 1” in the UK. No discount packages are taken into account.

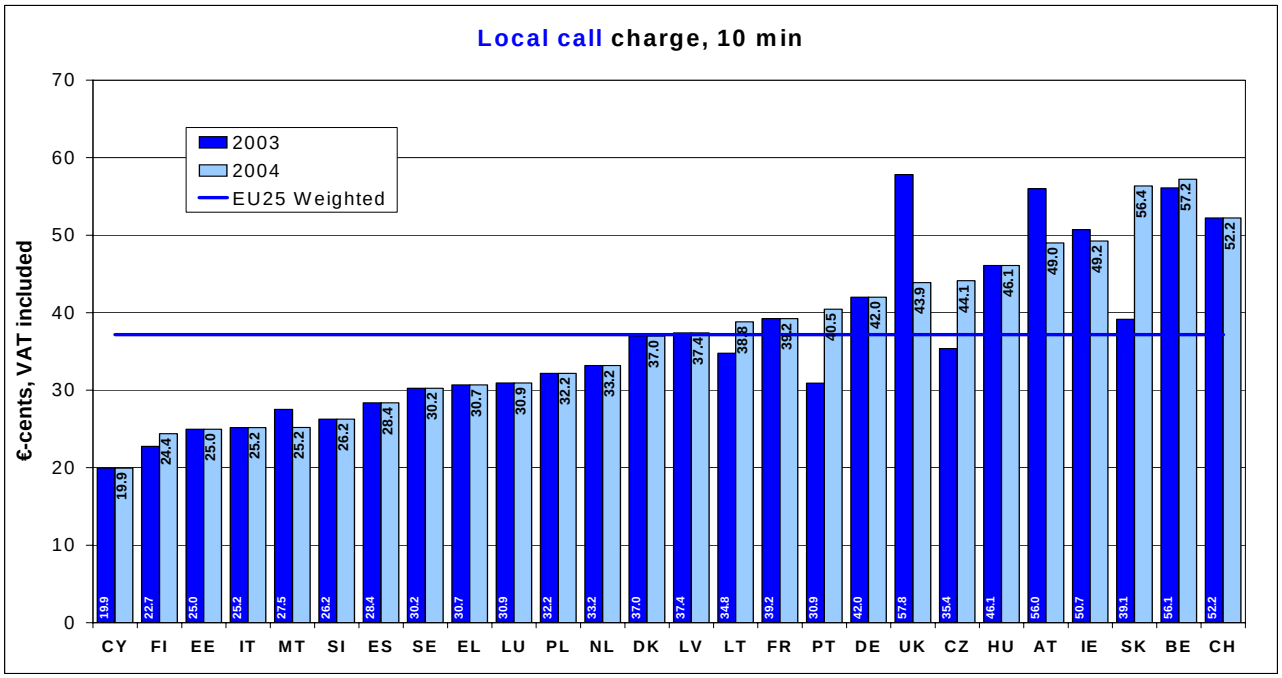
The EU average value is the average of the EU countries weighted according to the national population.

Figure 89



Source for Switzerland: OFCOM Switzerland.

Figure 90

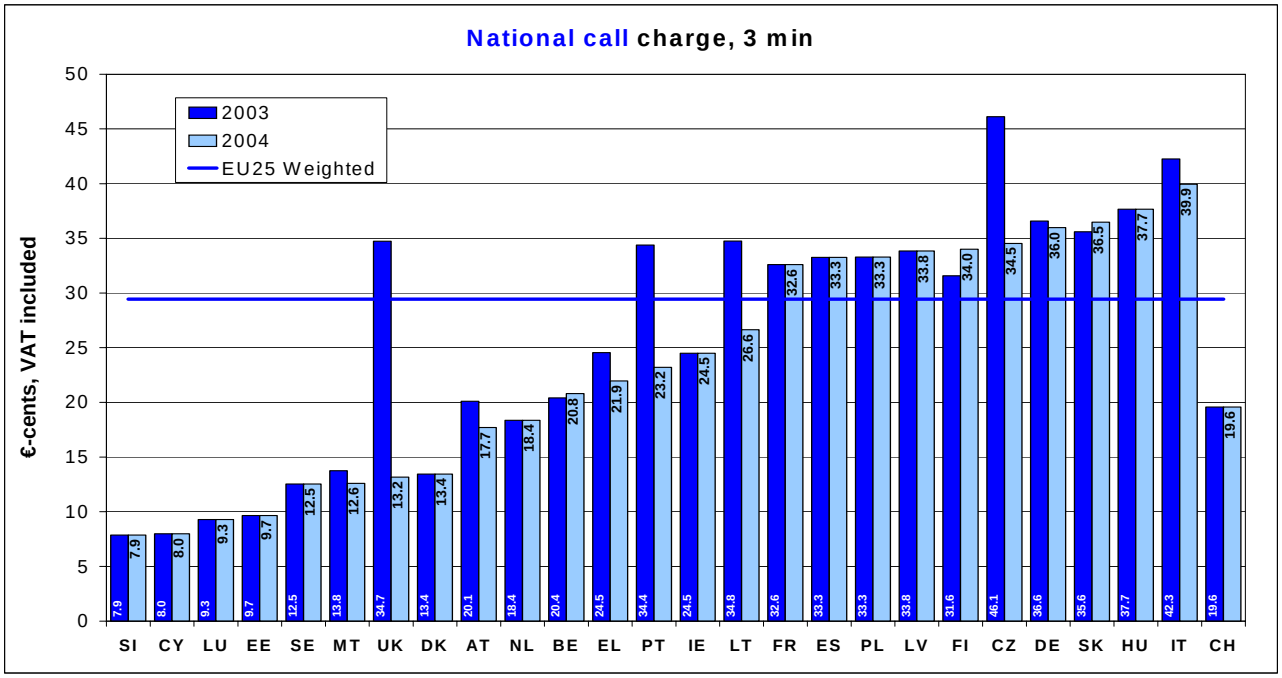


Source for Switzerland: OFCOM Switzerland.

Whatever the duration of the call (3 or 10 minutes), the prices charged for local calls in Switzerland are clearly above the EU25 weighted average. For a three-minute local call (Figure 89), only Belgium charges a higher price. The situation is slightly different for a ten-minute call (Figure 90), since two countries apply higher tariffs: Slovakia and Belgium. We note that Switzerland's poor showing is largely attributable to the introduction, in spring 2002, of a single national rate, independent of distance. Following this new method of charging, the price of local calls increased whilst that of national calls decreased. It should also be noted that, in all the countries considered, prices remained stable between 2003 and 2004, with some exceptions (for example, UK, Portugal, Czech Republic, Austria and Slovakia).

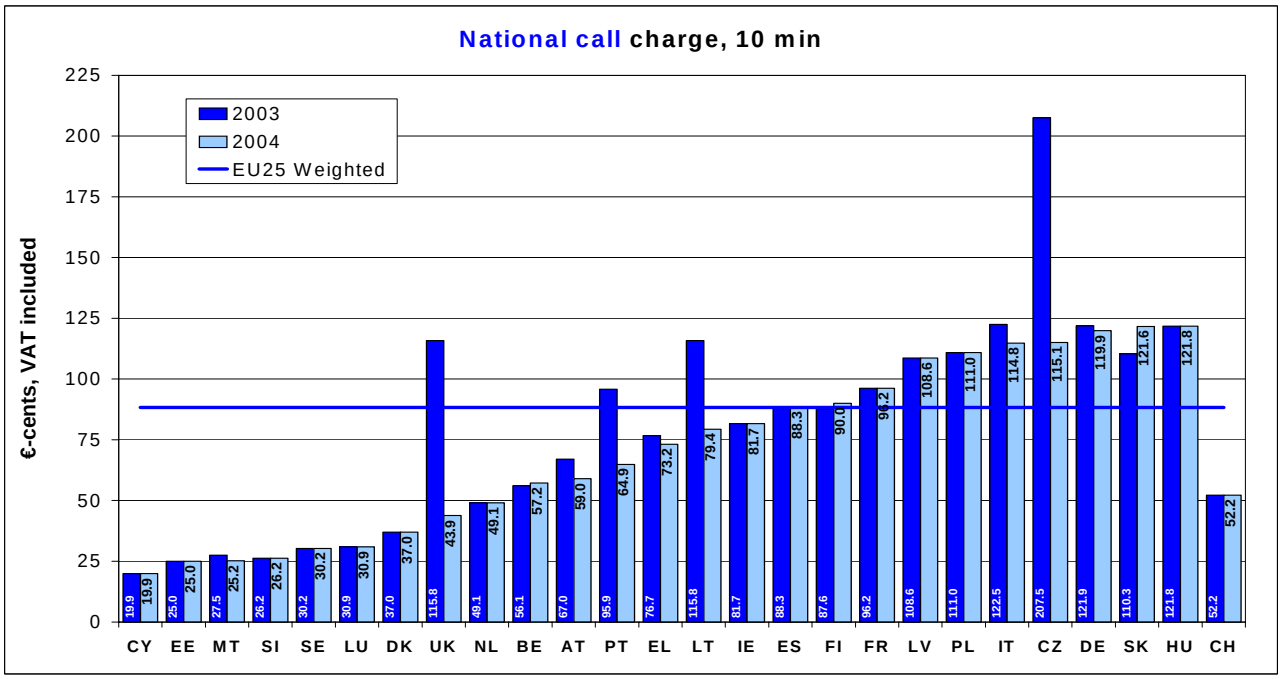
With regard to prices charged for national calls (Figures 91 and 92), Switzerland is well placed in the international comparison. Indeed, whatever the call duration, it is ranked at about place ten, with prices coming in clearly below the EU25 weighted average. Prices are lowest in Slovenia and Cyprus, at 7.9 €-cents in Slovenia for a three-minute call (19.6 in Switzerland) and 19.9 €-cents in Cyprus for a ten-minute call (52.2 in Switzerland). Italy has the highest charges for three minutes, whereas Hungary is worst placed for ten minutes. Unlike the prices of local calls, one can observe a number of changes between 2003 and 2004, but the volatility of the changes was contained within narrow limits.

Figure 91



Source for Switzerland: OFCOM Switzerland.

Figure 92



Source for Switzerland: OFCOM Switzerland.

Figure 93

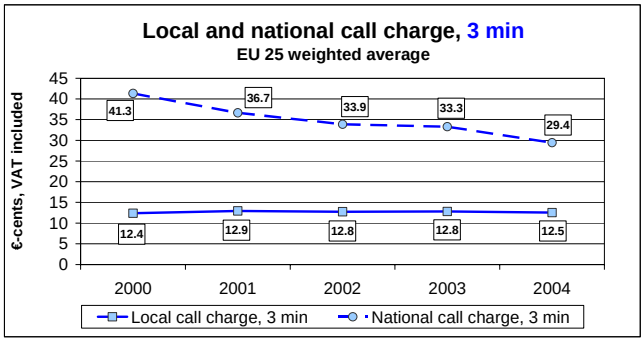


Figure 94

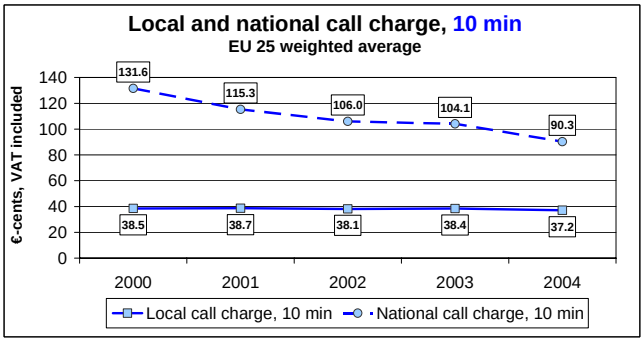


Figure 93a

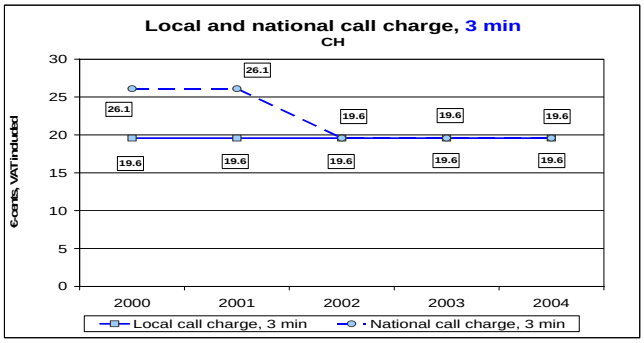
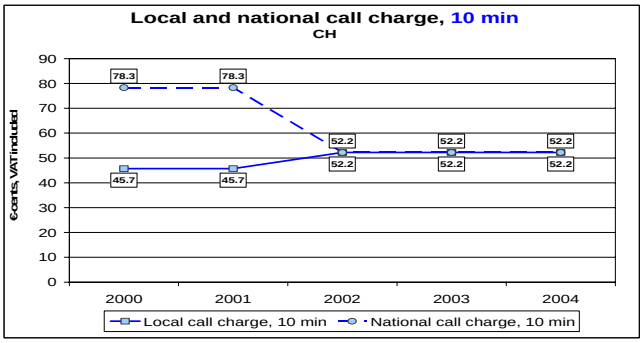


Figure 94a



Figures 93 and 93a show the evolution, from 2000 to 2004, of local and national prices for a three-minute call in the European Union countries and in Switzerland, respectively. With regard to local call prices, it has to be noticed that they remained somehow stable, in both cases, throughout the period in question. The prices of national calls for a three-minute call, on the other hand, fell in the geographical areas considered, quickly at first and then more slowly. Between 2003 and 2004, the changes were significant (between 11 and 15%) in Europe and non-existent in Switzerland, the market seeming to have stabilised itself. There are, in addition, two other differences between the Union countries and Switzerland. First, the evolution charted for the Union is smoother because it takes several countries into account. Secondly, since 2002 Switzerland has had a single price, independent of distance, and this explains why the two curves meet. One can draw more or less the same conclusions from the analysis of the trend in prices for ten-minute calls shown in Figures 94 and 94a.

8.5. TREND OF THE BASKET FOR FIXED NATIONAL CALLS (NATIONAL BASKET)

Figure 95

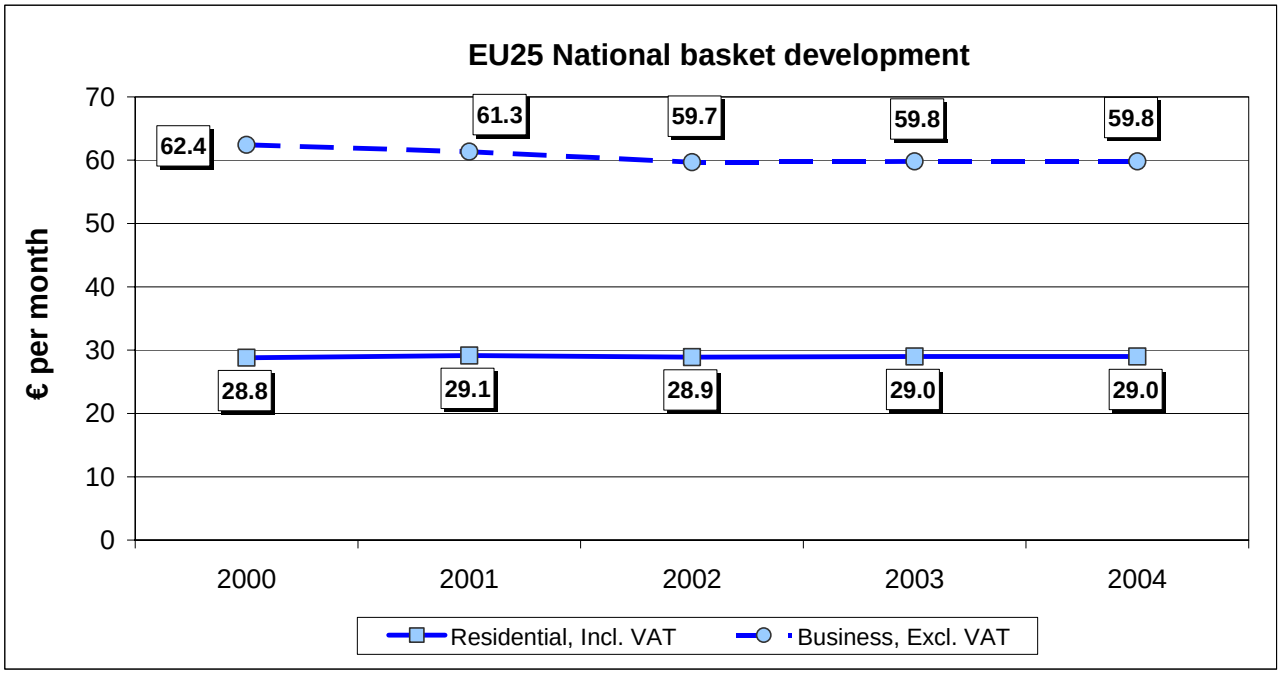
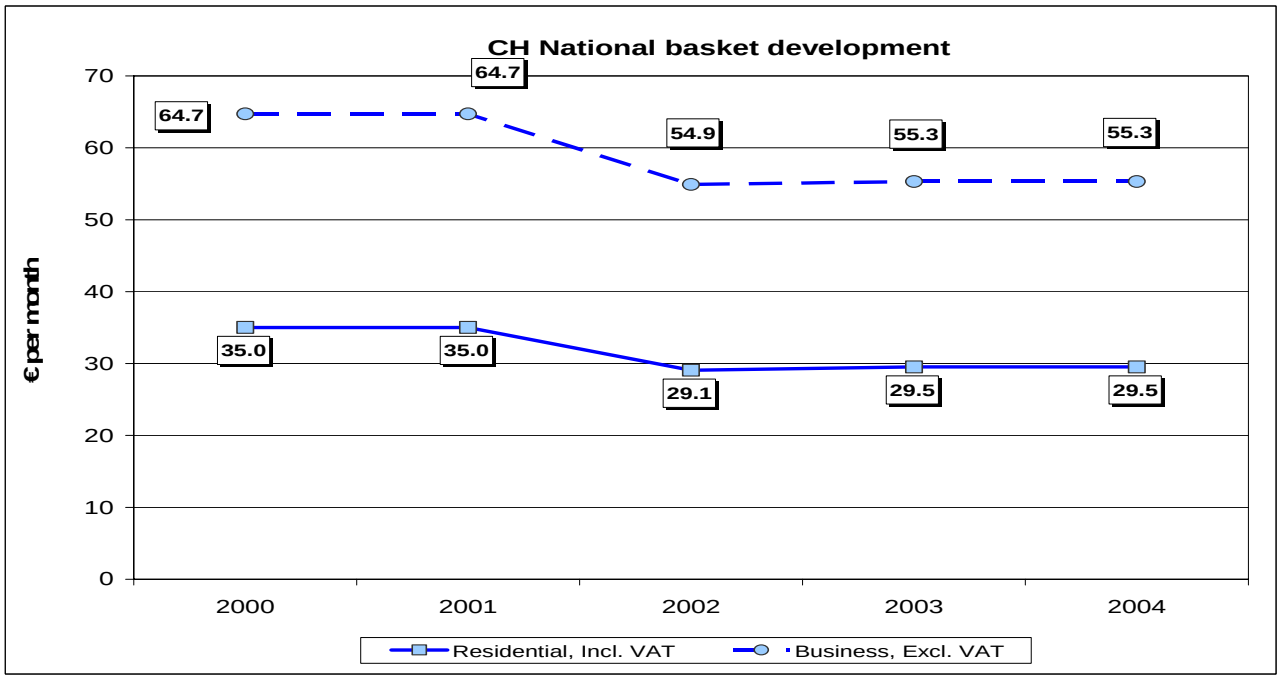
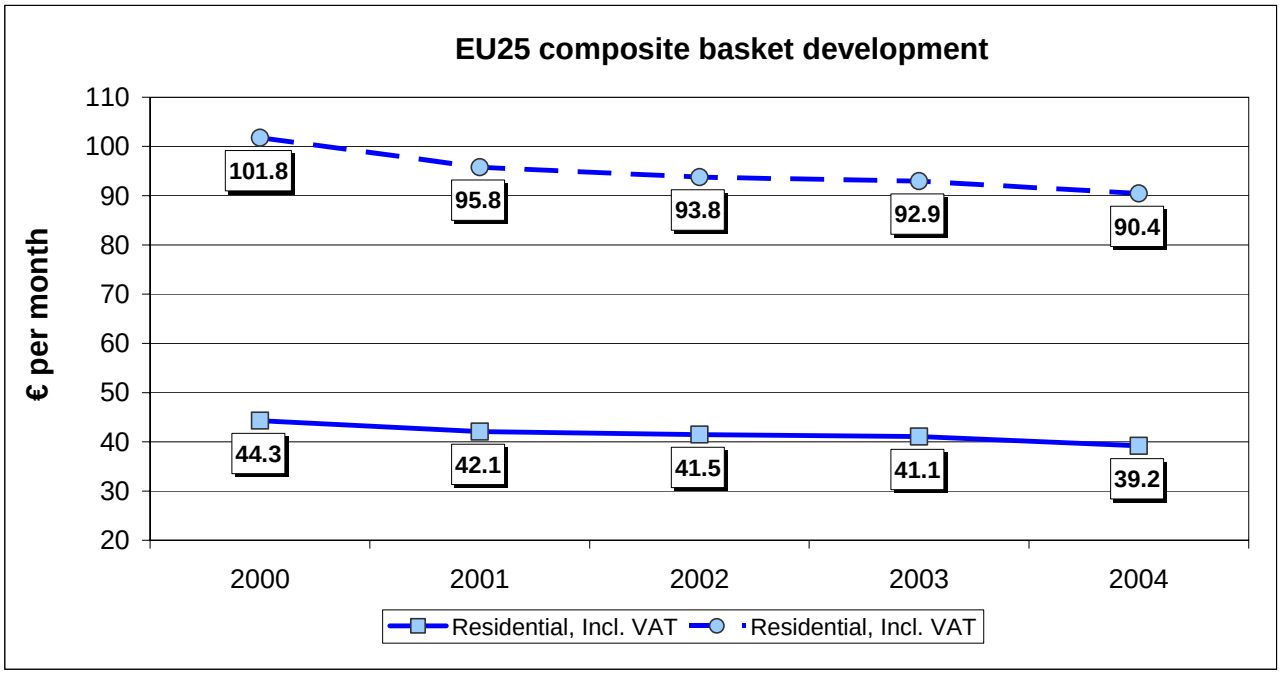


Figure 95a



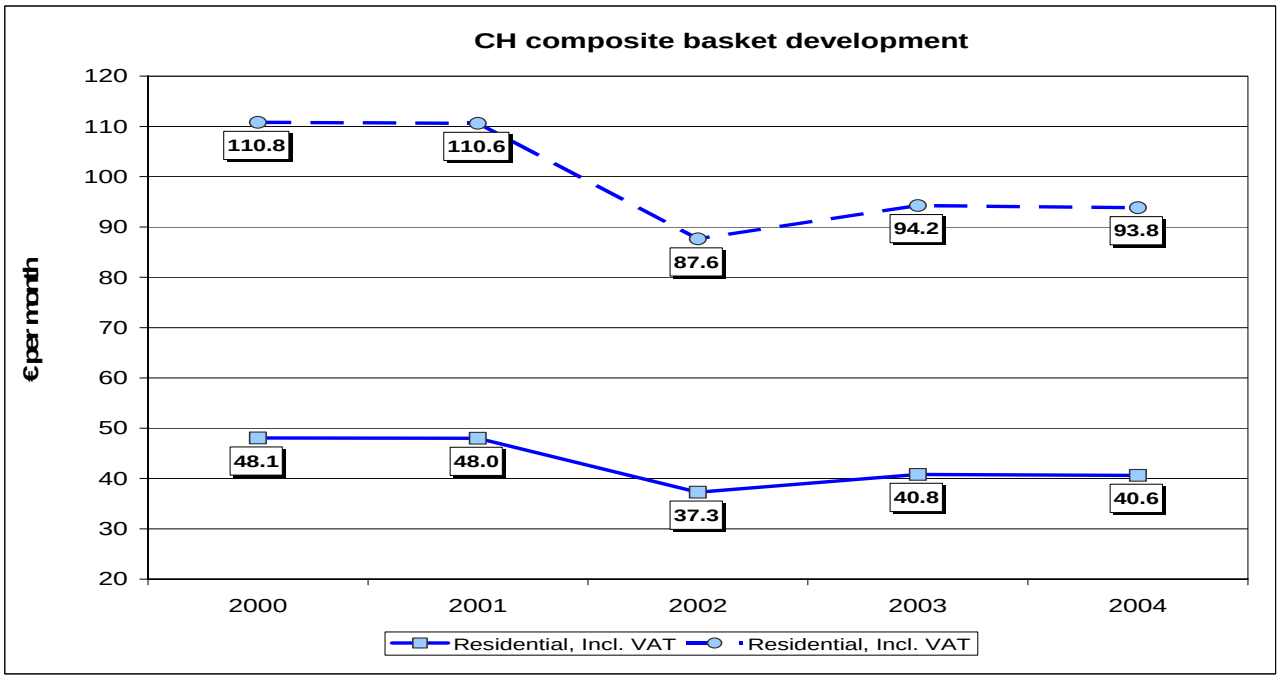
Source for Switzerland: Teligen T-Basket; OFCOM Switzerland computation.

Figure 96



Since 2000 all EU25 MS are included except Malta, which is included since 2003.

Figure 96a



Source for Switzerland: Teligen T-Basket; OFCOM Switzerland computation.

8.6. PRICE OF FIXED NATIONAL CALLS BY ALTERNATIVE OPERATORS

This section compares the prices charged for public voice telephony services by the incumbent operators in a sample of EU Member States and by the largest competitor in each Member State. The tariff packages selected will impact on this comparison, although care has been taken to ensure reasonable comparability.

In Switzerland, the comparison was made with Swisscom's main competitor, Sunrise, which does not automatically mean that it represents the cheapest alternatives available to consumers. The prices are those of August 2004 and correspond to the peak period. If one compares the price of a three-minute local and national call (Figure 97 and Figure 99), Sunrise charges 20% less. The same comparison made for a ten-minute call (Figures 98 and 100) show a 10% difference between the two operators, again in favour

of Sunrise. It should be noted that this narrowing of the difference is largely explained by the fact that the two operators do not apply the same charging systems. Swisscom applies a unit-based charging system (CHF 0.10 per x seconds) and Sunrise charges by the second; the results are therefore dependent on the choice of the exact number of minutes on which the comparison is based. In fact, if the number of minutes considered corresponds to the precise moment at which the switch to the next additional unit occurs, Swisscom's prices are comparatively less attractive. We further note that since Switzerland now has only distance-independent prices, it is not necessary, unlike in other countries, to carry out an analysis which is differentiated according to the distance of the call (local or national). Looking at Figures 97 to 100, there are two more interesting general discoveries to be made. The first is that there are still substantial differences in price between the historic operator and its main competitor, which means that competition has not yet completely homogenised prices. The second lies in the fact that in certain countries the alternative operator charges a higher price than the historic operator (the case of Portugal, for example). The reality is therefore always more complicated than one might first imagine.

Figure 97

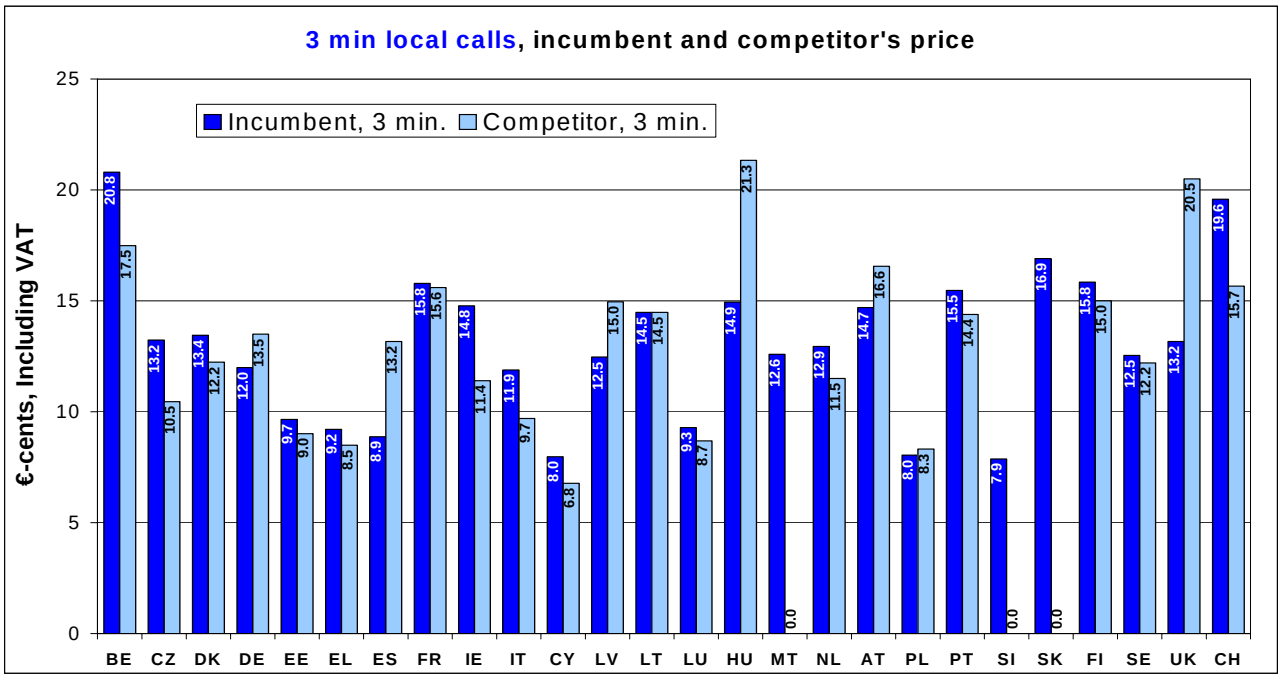
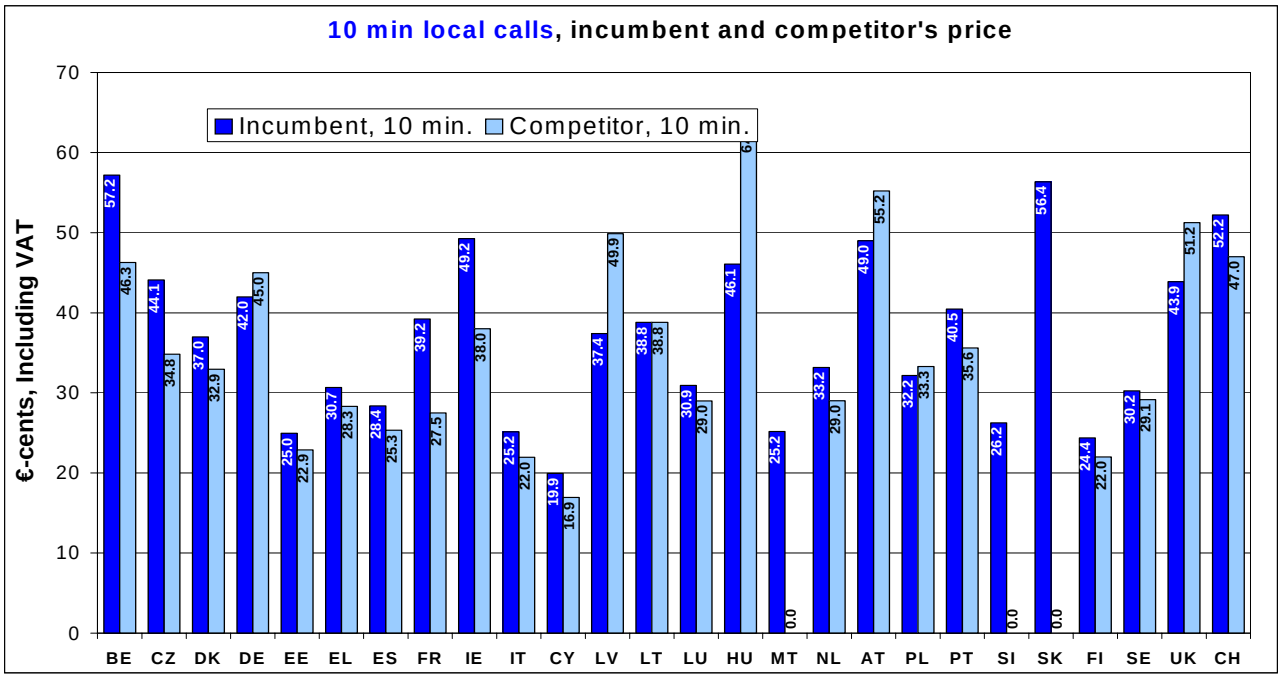


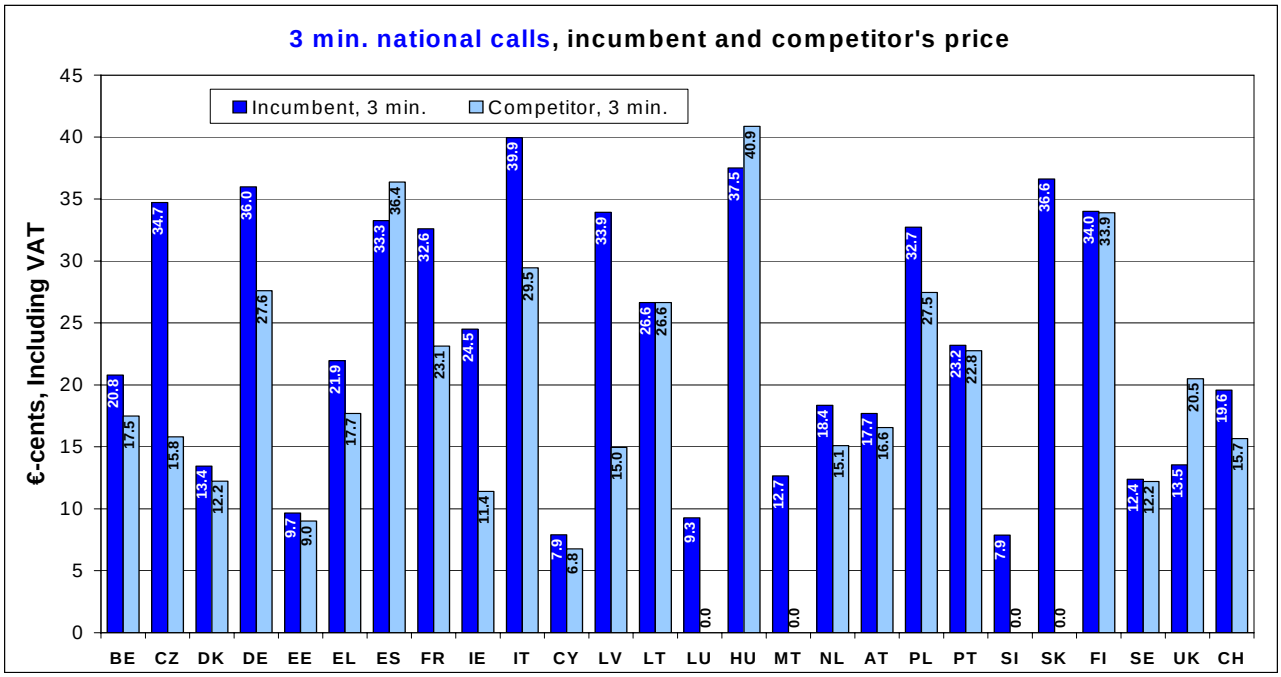
Figure 98



TG in Latvia has charges several times above the incumbent. The representation in the graph has been reduced 5 times to maintain a sensible representation of other countries.

Source for Switzerland: OFCOM Switzerland.

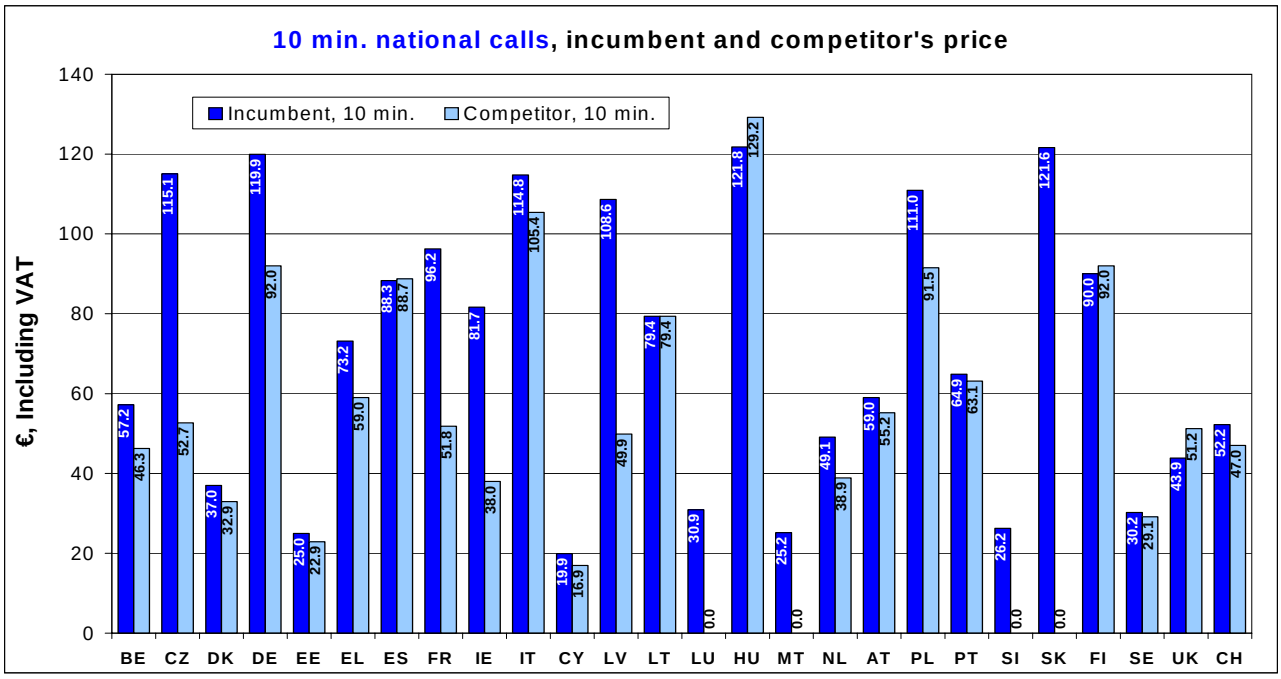
Figure 99



TG in Latvia has charges several times above the incumbent. The representation in the graph has been reduced 5 times to maintain a sensible representation of other countries.

Source for Switzerland: OFCOM Switzerland.

Figure 100



TG in Latvia has charges several times above the incumbent. The representation in the graph has been reduced 5 times to maintain a sensible representation of other countries.

Source for Switzerland: OFCOM Switzerland.

8.7. INCUMBENT OPERATOR PRICE FOR AN AVERAGE FIXED INTERNATIONAL CALL (INTERNATIONAL CALL BASKET)

The basket of international calls for each country provides an estimate of the average cost of an international call.

For the basket comparison of international PSTN call charges, the OECD traffic weight basket methodology is used. The basket calculates an average charge for calls to all OECD destination countries.

The residential basket includes VAT. Call charges are weighted between peak and off-peak hours: 25% for peak hours and 75% for off-peak hours. The business basket excludes VAT. Call charges are weighted 75% for peak hours and 25% for off-peak hours. The average price of an international call is lower for business users than for residential users because of the heavier weighting given to three-minute peak-hour calls, which are, on average, cheaper than five-minute off-peak calls, and because VAT is excluded for business users but included for residential users.

International call charges vary widely with the destination, and the basket results are based on a weighted average call charge. Traffic weighting is used, as defined by the OECD for the destination weighting, as per the revision in 2000. This method applies a weight to each destination based on the traffic volumes reported on that route (ITU statistics).

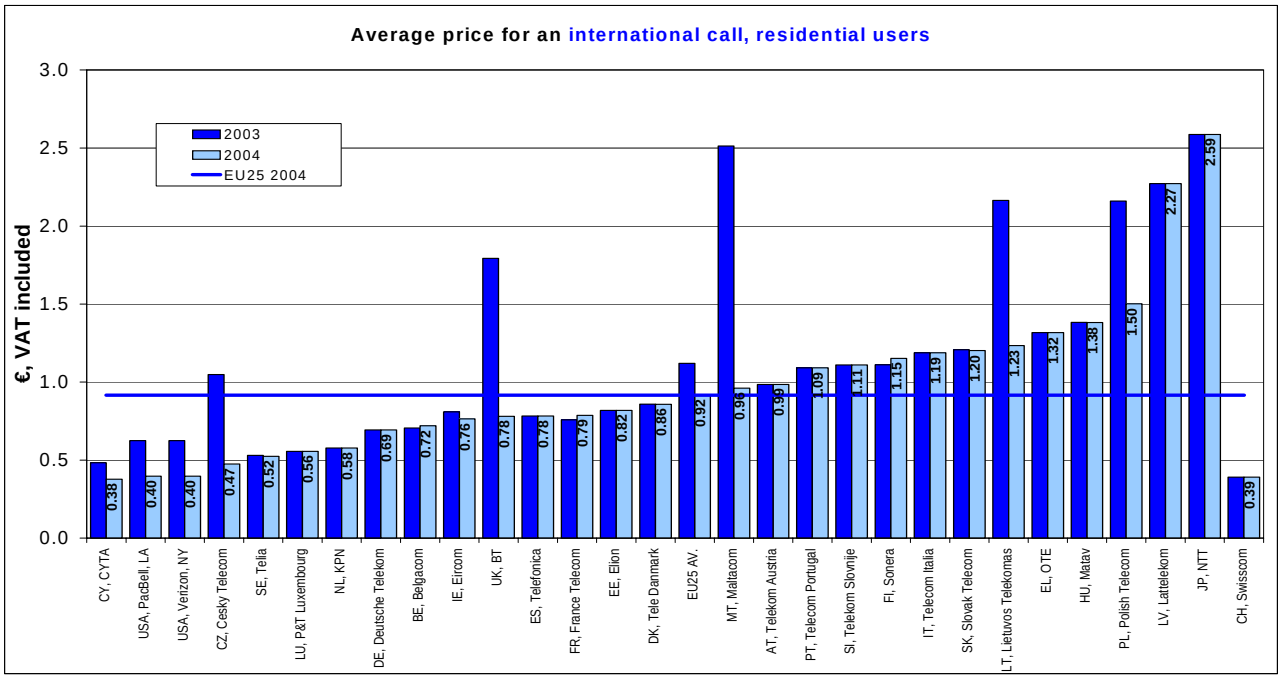
All tariffs are standard prices from ex-incumbents operators, and both these operators and new entrants may offer lower prices.

The EU average value is the average of the EU countries weighted according to the national population.

A full description of the methodology can be found at the end of this report.

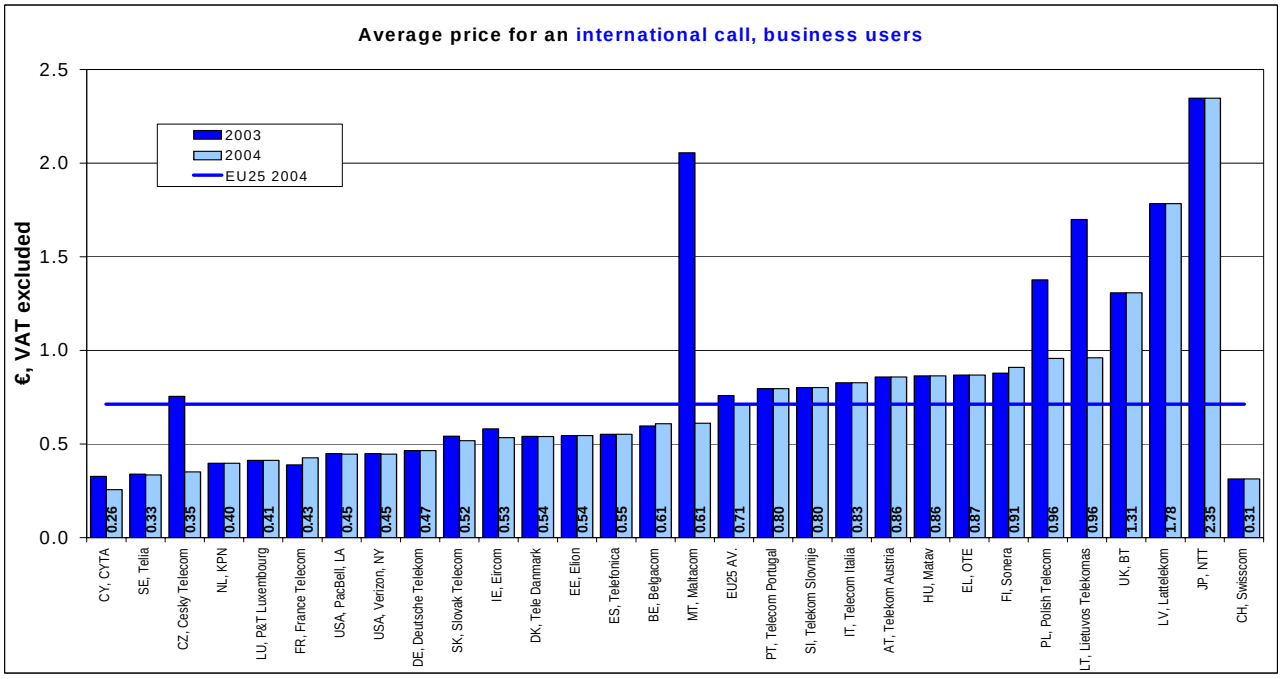
With regard to the price of international calls, Switzerland is in an exceptional position since there is only one country (Cyprus) in which prices are more attractive, either for residential users (Figure 101) or for business (Figure 102). Moreover, the prices charged are well below the weighted European average. For a country such as Switzerland, which is traditionally orientated towards exporting, this situation is encouraging. Japan, with prices which literally go through the roof, is at the other end of the league table.

Figure 101



Source for Switzerland: Teligen T-Basket; OFCOM Switzerland computation.

Figure 102

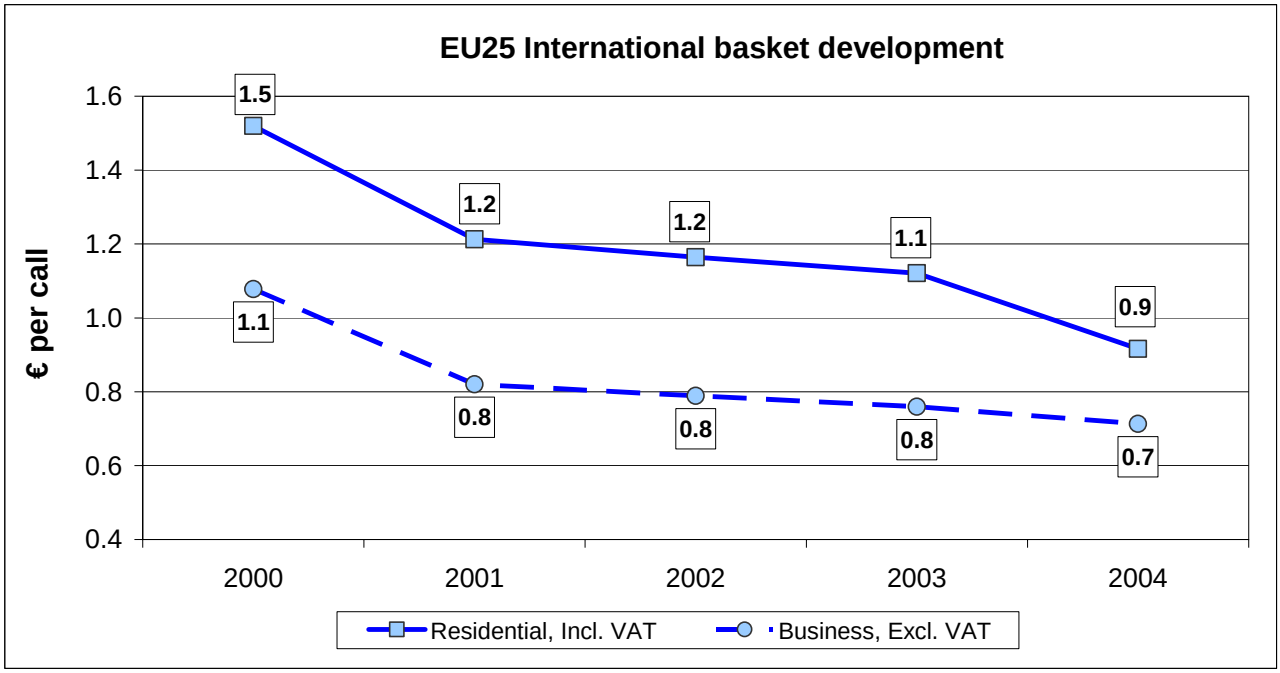


Source for Switzerland: Teligen T-Basket; OFCOM Switzerland computation.

Figures 103 and 103a display the evolution, between 2000 and 2004, of the price of an international call in the European Union countries and Switzerland, respectively. In the Union countries, prices fell constantly and progressively. In Switzerland, on the other hand, the competitive pressure exerted by the new entrants had some very

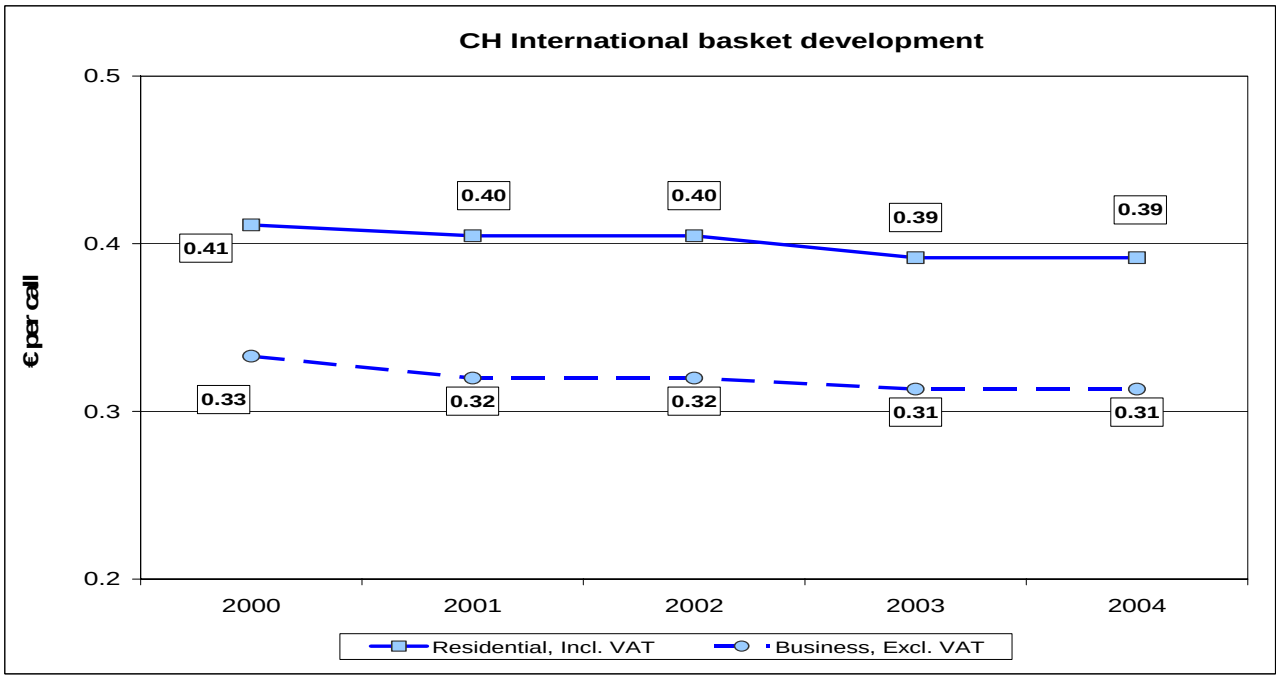
rapid and marked effects, since prices fell by almost 80% between 1998 and 2000[9], regardless of the type of user (business or residential). Since then, the recorded fall has been negligible.

Figure 103



Source for Switzerland: Teligen T-Basket; OFCOM Switzerland computation.

Figure 103a



Source for Switzerland: Teligen T-Basket; OFCOM Switzerland computation.

[9] Source: OFCOM Switzerland, The Swiss telecommunications market – an international comparison, Extract from the 9th European Union implementation report extended to include Switzerland, Bienne, July 2004, p. 93-94.

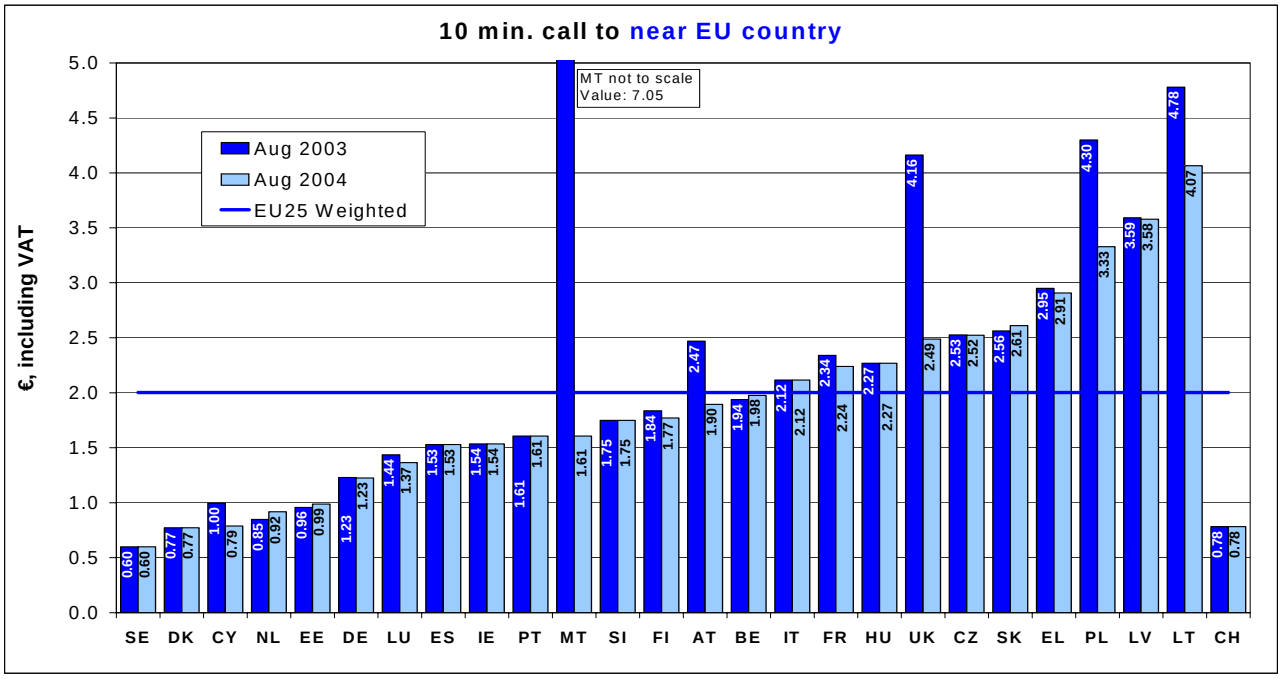
8.8. INCUMBENT OPERATOR PRICE OF CALLS TO EU, JAPAN, USA

The following two charts show the prices of a 10-minute international call (including VAT) during peak hours (weekday 11.00AM) to four different destinations: Near EU country, Distant EU country, USA and Japan. Figures are expressed in € at August 2004 values, including VAT, and they refer to the European incumbent operators and the EU weighted average. The table below summarises the definition of near and distant EU destination countries.

From:	Near EU	Far EU
BE	FR	EL
CZ	DE	FI
DK	SE	EL
DE	FR	EL
EE	FI	EL
EL	IT	DK
ES	PT	DK
FR	BE	EL
IE	UK	EL
IT	EL	DK
CY	EL	DK
LV	SE	EL
LT	SE	EL
LU	DE	EL
HU	AT	FI
MT	IT	FI
NL	DE	EL
AT	DE	EL
PL	DE	EL
PT	ES	DK
SK	CZ	FI
SI	AT	FI
FI	SE	EL
SE	DK	EL
UK	FR	EL
CH	**DE**	**SE**

As far as calls to its direct neighbours (Figure 104) are concerned, it was assumed that Germany was the closest country to Switzerland. It is apparent that in the international comparison a Swiss user pays relatively very little to make a ten-minute call to his German counterpart. Only Swedish and Danish users enjoy more attractive conditions. Furthermore, the cost in Switzerland is very well below the weighted European average.

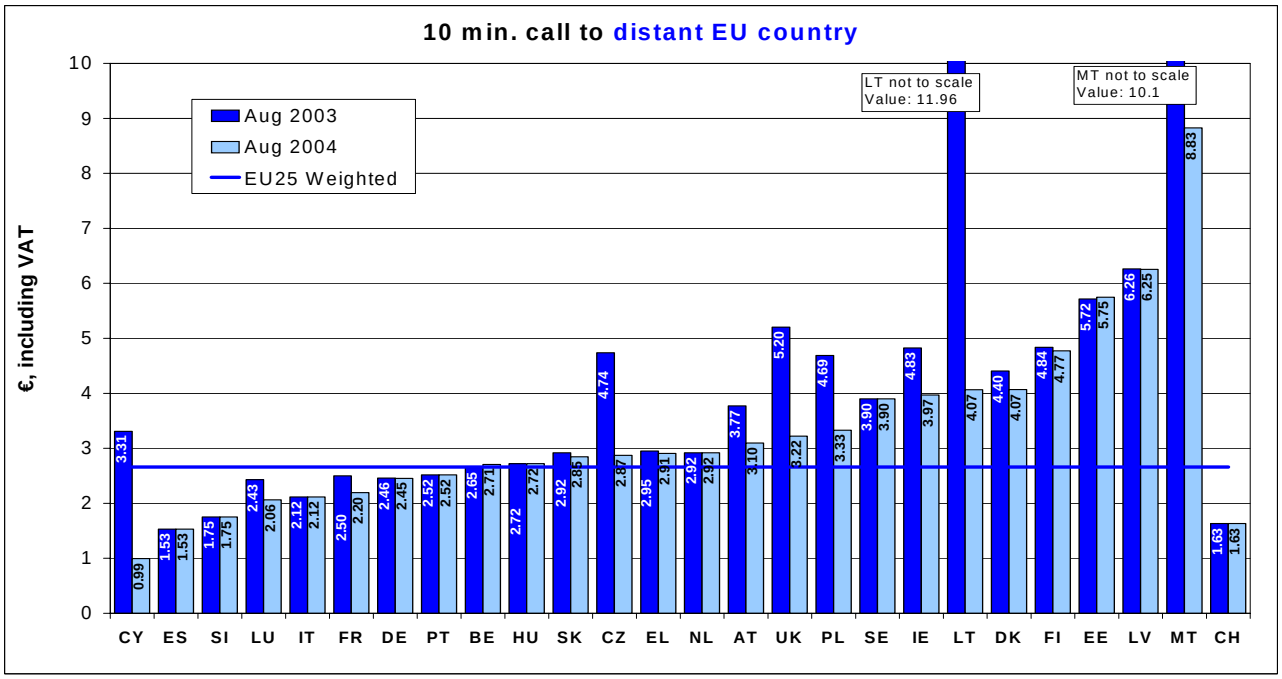
Figure 104



Source for Switzerland: OFCOM Switzerland.

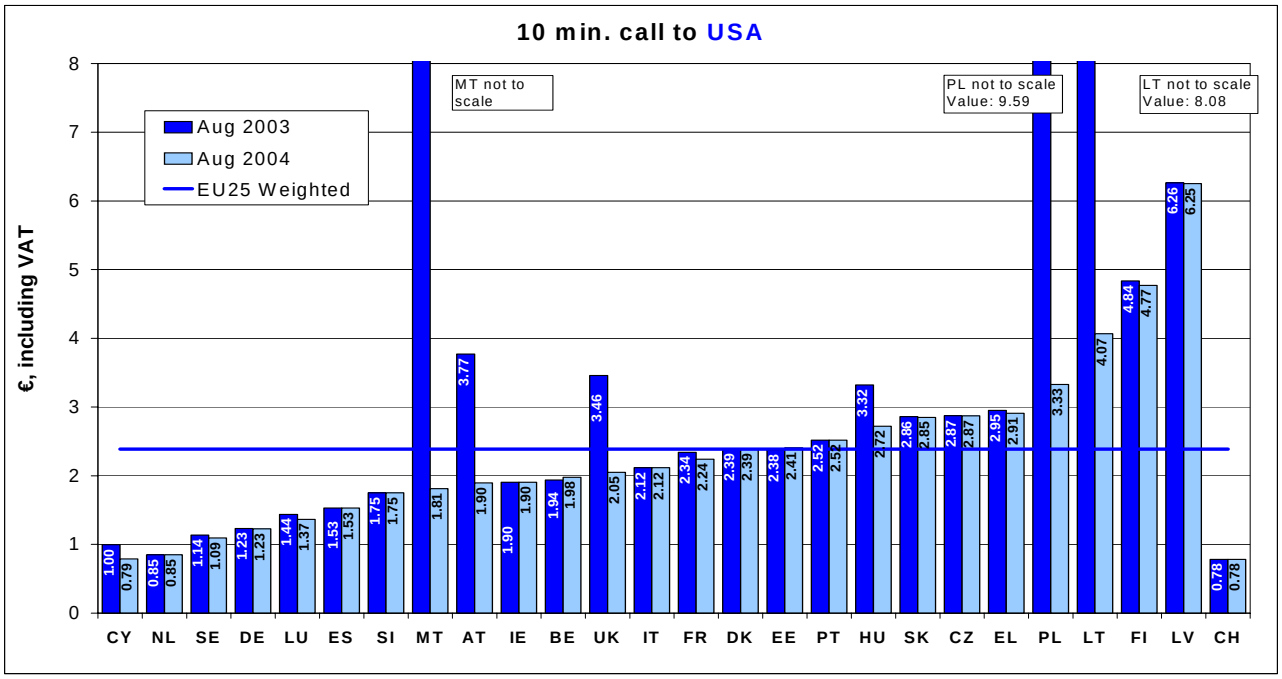
Figure 105 shows the price of a ten-minute call made between each country examined and its most distant neighbour. For Switzerland, this was deemed to be Sweden. Once again, the situation turns out to be extremely favourable in Switzerland, since it is in third place, just behind Cyprus and Spain, in the list of least expensive countries.

Figure 105



Source for Switzerland: OFCOM Switzerland.

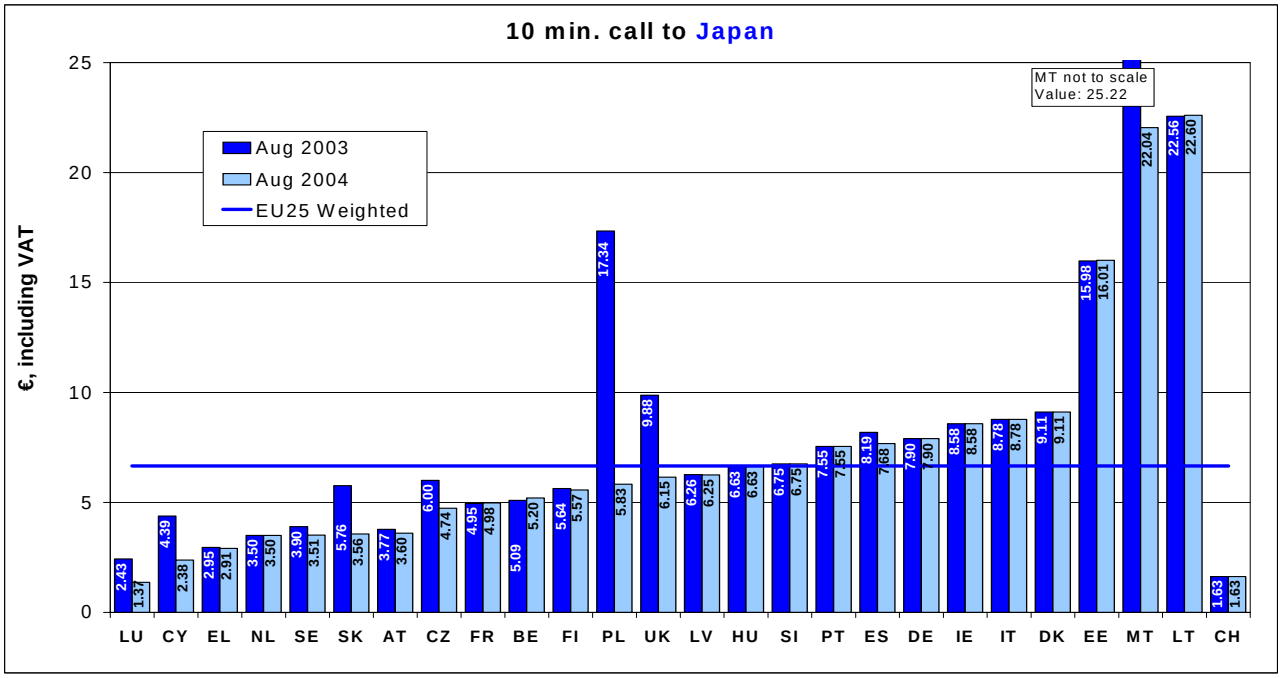
Figure 106



Source for Switzerland: OFCOM Switzerland.

Figures 106 and 107 show the cost of a ten-minute call to the USA and Japan, respectively. In both cases, it is quite impossible to find conditions more favourable than those which prevail in Switzerland, except Cyprus and Luxembourg in the case of a call to Japan.

Figure 107



Source for Switzerland: OFCOM Switzerland.

8.9. ALTERNATIVE OPERATORS' PRICE FOR FIXED INTERNATIONAL CALLS

The equivalent prices for competitor providers in the EU countries are shown in the charts below. One competitor per country has been analysed. The prices are shown for a 10 minute call, at peak time weekdays.

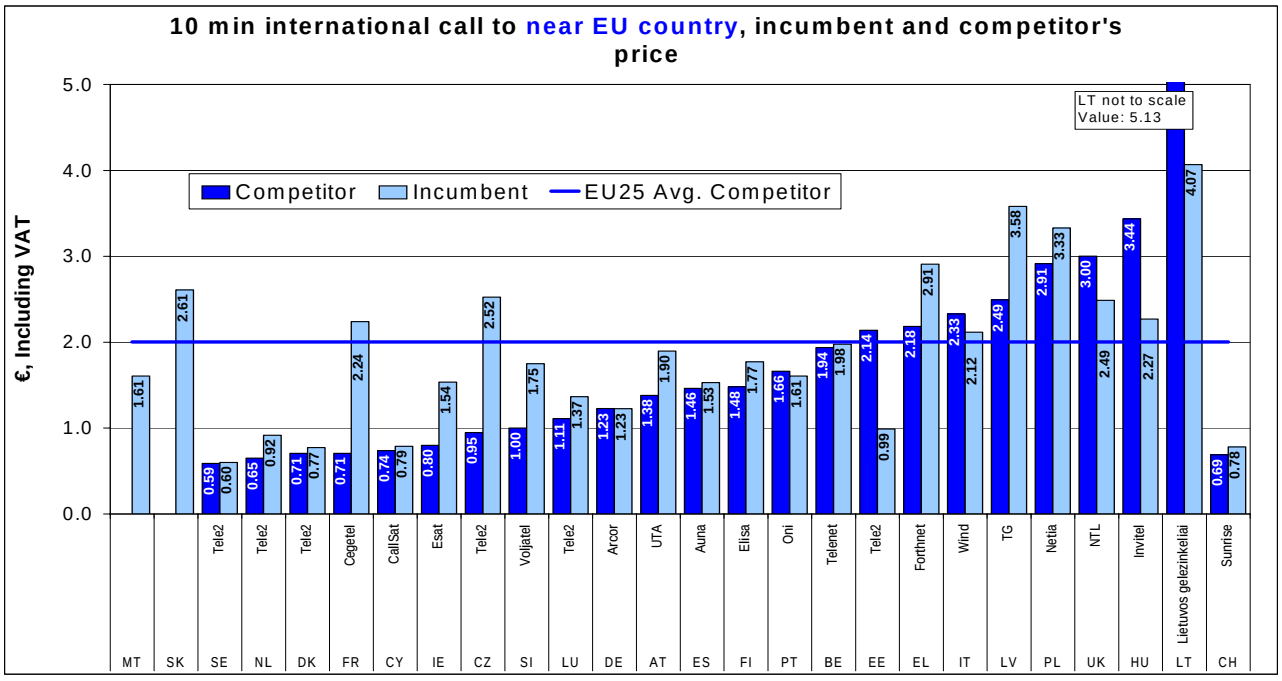
Prices include VAT and are applicable for August 2004.

For Switzerland, the comparison was made with the prices charged by Sunrise, Swisscom's main competitor, which does not necessarily mean that they are the cheapest solutions available on the market.

As was shown in the preceding section (8.8), the prices charged in Switzerland are well below the European average and it is extremely rare to find more advantageous conditions. In spite of the very low level of the prices billed by the dominant operator, it is possible for a Swiss user to benefit from the substantial advantages available from the competition. Thus the difference for a ten-minute telephone call with the main alternative operator is:

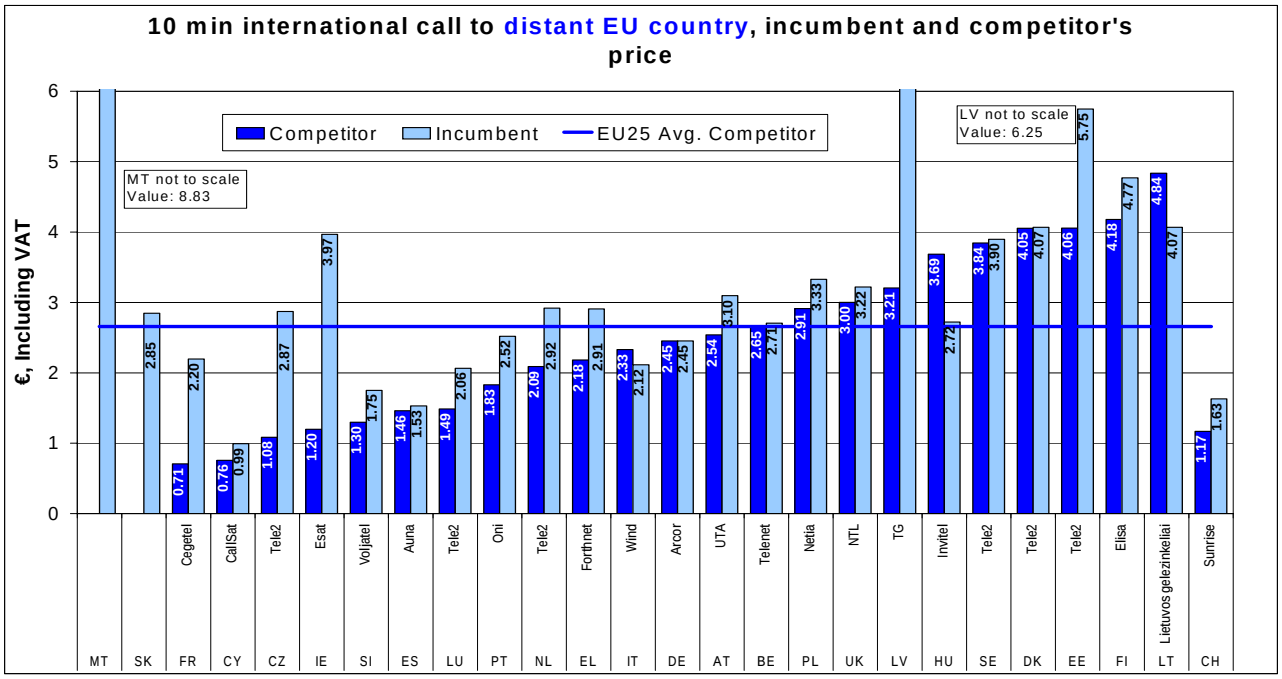
- -11.5% for a call to the nearest neighbour country (Figure 108);
- -28.2% for a call to the most distant EU member country (Figure 109);
- -11.5% for a call to the USA (Figure 110);
- and finally, -20.2% for a telephone call to Japan (Figure 111).

Figure 108



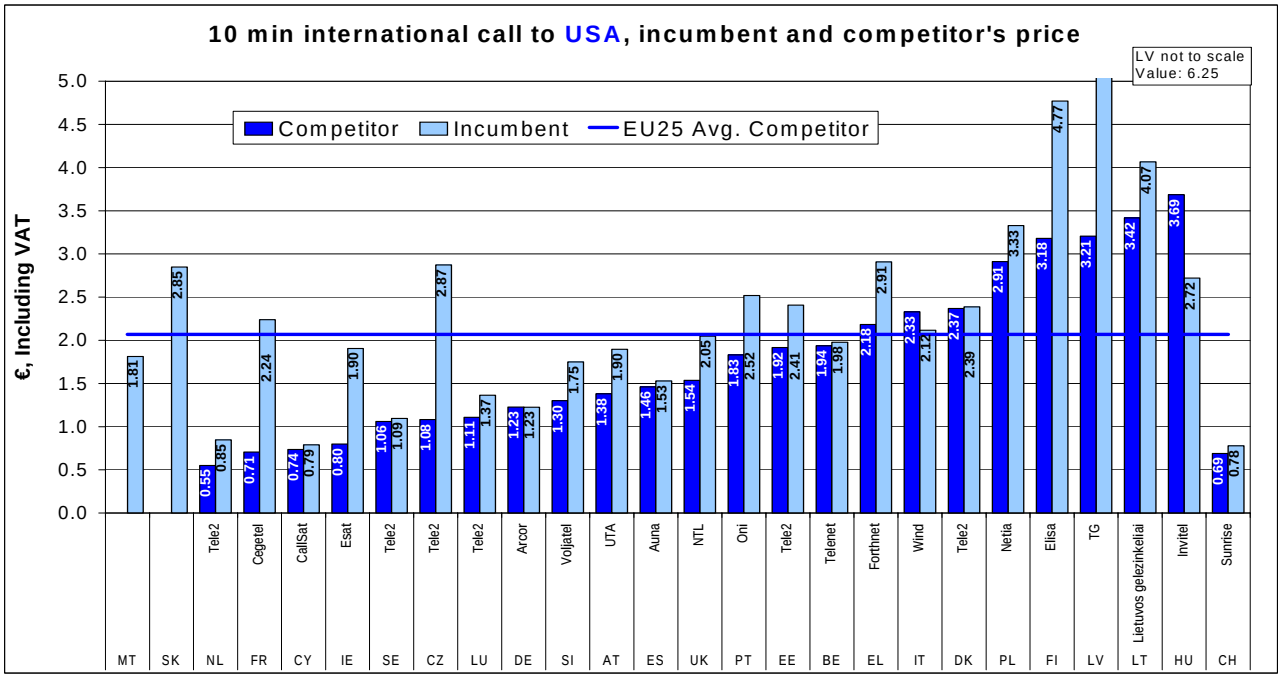
Source for Switzerland: OFCOM Switzerland.

Figure 109



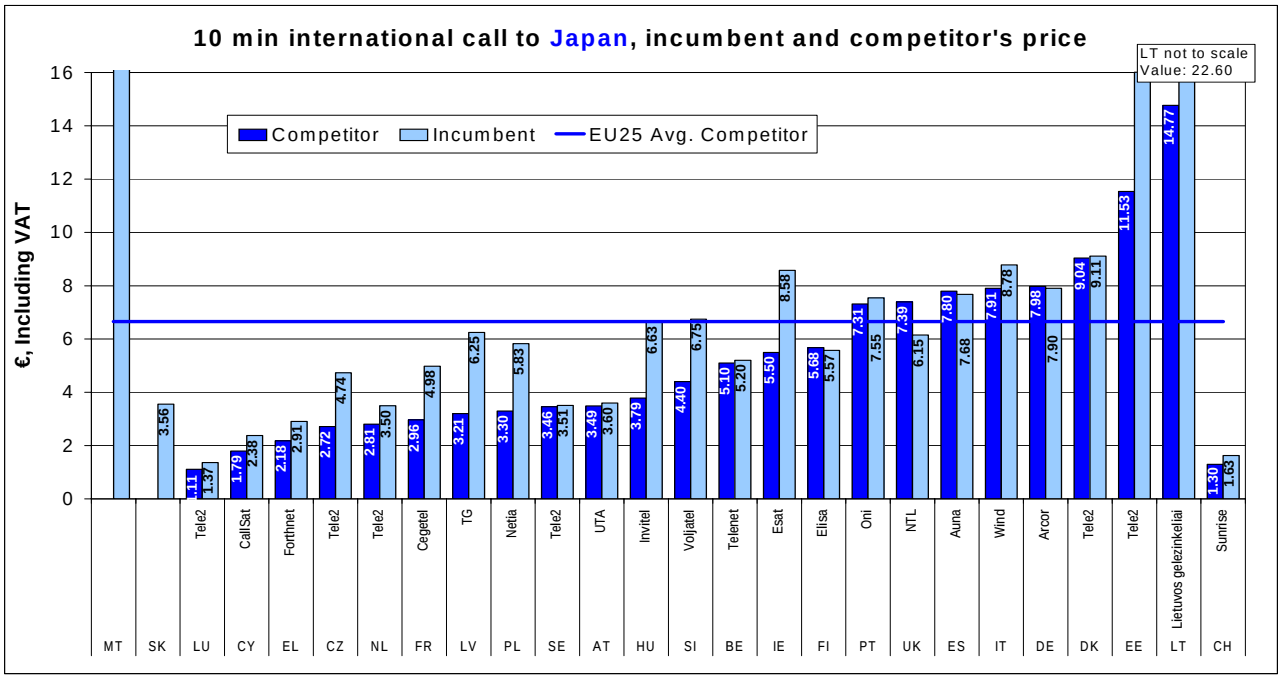
Source for Switzerland: OFCOM Switzerland.

Figure 110



Source for Switzerland: OFCOM Switzerland.

Figure 111



Source for Switzerland: OFCOM Switzerland.

9 LEASED LINES RETAIL TARIFFS

This section contains an overview of prices charged by incumbent operators to end users in each Member State (and in some cases for Switzerland) for national and international leased line services as at 1 August 2004. Figures do not cover wholesale prices. Price developments are also analysed over the period August 2000-2004.

The figures and the information are taken from a study carried out by Teligen-HI Europe for the Commission. Data on standard retail prices charged by incumbent operators have been collected in each country.

In Switzerland, the retail leased lines market is characterized by opacity with its origin in the small number of players and the competition in which they engage. Charges do not fall with usage. The sole source of information at our disposal is the Teligen T-Basket product. This product, unfortunately, does not include an analysis as detailed as the one presented in this report, which is why certain markets could not be examined (34Mb/s and 155Mb/s, as well as international leased lines). Teligen obtains information from Swisscom and calls the reader's attention to the fact that the prices charged by the historic operator are negotiated on a case by case basis. Thus Teligen assumes that the notified prices are an objective reflection of the negotiated prices. One final point: Since February 2004, data that were provided by Swisscom to Teligen are no more delivered. This explains why no data are displayed in 2004 for Switzerland.

9.1. INCUMBENTS' NATIONAL LEASED LINES

National leased line data is provided for 2003 and 2004. Two distances are covered: 2 km (local circuits), and 200 km. Tariffs are taken from the incumbent operator in each country. Other operators may offer other prices. In order to properly reflect the tariff structures used in some countries, the circuits may be considered in one of two different ways, depending on tariff structure. The one to apply will differ from carrier to carrier. The principles used in this report for calculating the price of a full circuit are:

	1: When tariff specifies local tail prices separately, in addition to main circuit.		2: When tariff specifies a single price for the circuit, end to end, including local tails.	
	Local tail length	Main circuit length	Local tail length	Main circuit length
2 km circuit	1 km	0	0	2 km
200 km circuit	2 km	196 km	0	200 km

Note: The local tail length is per tail, i.e. there will be 2 such tails with each circuit.

Where several tariff options exist depending on type of location, the criteria for choice is as follows:

- 2 km circuits are always within a major city (usually the Capital)
- 200 km circuits are between a major city and a "minor" city

As the definitions vary between countries, the type of tariff option chosen will also vary (see details below). The countries where the price may vary with location or other non-distance related definitions are: Belgium, France, Austria, Finland, Sweden and the UK.

Some operators apply termination charges per local end, without necessarily covering the local tail circuit within that charge.

4 types of circuits are covered: 64 kb/s, 2 Mb/s, 34 Mb/s and 155 Mbit/s. As not all carriers publish tariffs for all these bitrates and all years, there may be some gaps in the information, especially for higher bitrates.

Some carriers offer 2 Mb/s circuits as both structured and unstructured. In this analysis only unstructured circuits are included.

Also, some carriers offer different types of leased lines, often in the form of "basic circuits" and circuits in a managed network. Only "basic circuits" are included in this analysis, as the managed network services are not comparable between carriers.

Lately a few carriers have decided not to publish their prices for some or all types of leased lines. This makes it increasingly difficult to present a full overview of the prices in all 25 EU countries.

For the USA the prices of Verizon intra-LATA circuits for New York State have been used. The bitrates of leased lines offered in some countries may be different

from the ones found in most EU member States. Some operators may offer 56 kb/s instead of 64 kb/s, 1.5 Mb/s instead of 2 Mb/s, 45 or 50 Mb/s instead of 34 Mb/s, and 140 or 150 Mb/s instead of 155 Mb/s. Prices shown in the tables and graphs in this section of the report have been adjusted according to the difference in capacity.

All prices are presented in EURO per year, excluding VAT.

National leased lines prices as at 1 August 2004.

The validity dates of the tariffs used in this section are:

	Valid date		Valid date
Belgium	01/06/04	Hungary	01/01/02
Czech Rep.	01/05/03	Malta	01/07/03
Denmark	01/07/04	Netherlands	01/11/03
Germany	17/04/02	Austria	01/09/01
Estonia	01/06/04	Poland	01/01/00
Greece	01/04/03	Portugal	01/03/03
Spain	01/01/04	Slovenia	00/01/00
France	01/07/03	Slovakia	01/06/01
Ireland	18/06/03	Finland	00/01/00
Italy	01/11/03	Sweden	
Cyprus	01/04/04	UK	01/12/03
Latvia	01/06/99	Japan	01/10/00
Lithuania	27/06/03	USA, Verizon	01/01/03
Luxembourg	01/01/02	USA, Pacbell	08/08/02

Belgium: Belgacom has divided its network into 4 levels based on “economic concentration”. The tariffs shown are for circuits within or between level 1 areas, “Very high economic concentration”. Prices for 155 Mb/s shown here are adjusted from prices for 140 Mb/s circuits. Local circuits within an exchange area are priced as a regular circuit of the given distance.

Czech Republic: Cesky Telecom defines prices for all bit rates based on the price of a 64 kb/s circuit. Coefficients are given for each bit rate available (up to 2 Mb/s), and the price is the product of the 64 kb/s price and the coefficient. Local circuits are defined as a 0 km circuit. 10 distance zones are defined for circuits with more than 0 km between serving exchanges. There are no incremental charges (i.e. per km).

Denmark: TDC divides the leased lines into two categories: Local circuits based on distance bands and whether the two ends are connected to the same exchange or neighbouring exchanges. Long distance circuits connected to different exchanges, divided into 4 distance bands. There are no incremental charges (e.g. per km). Prices for 155 Mb/s shown here are adjusted from prices for 140 Mb/s circuits.

Germany: Deutsche Telekom offers different types of circuits. In this analysis the “Standard Festverbindungen” is used. Tariffs are divided into: a)Local 1 (same exchange); b) Local 2, up to or above 15 km; c)Long Distance, < 15km, 15 – 50 km, 50 – 150 km, > 150 km. Local 2 and Long distance use incremental (per km) charges. At 34Mb/s and 155 Mb/s access circuit charges apply, with a distance (per km) element.

Estonia: Elion divides the leased lines into distance bands of 0 – 6 km, 6 – 10 km, 10 – 20 km, >20 km. Trunk circuits above 20 km use incremental (per km) charges. Local circuits are priced as a regular circuit of the given length.

Greece: OTE divides the leased lines into: a) Local circuits, b) Trunk circuits (< 35 km, 35 – 70 km, 70 – 150 km, > 150 km). Trunk circuits use incremental (per km) charges. 64 kb/s charges are for Hellascom service from 2003.

Spain: Telefonica strictly divides leased lines according to distance: a) Distance bands: 0 – 4 km, 4 – 20 km, 20 – 70 km, 70 – 300 km, 300 – 500 km, > 500 km. All bands use incremental (per km) charges. Telefonica does not publish prices for 155 Mb/s circuits. Local circuits within an exchange area are priced as a regular circuit of the given distance.

France: France Telecom offers leased lines in the products Transfix and Transfix 2.0. Transfix is the basic service, and the one used in this analysis. The tariff is divided into distance bands: 0 – 10 km, 10 – 50 km, 50 – 300 km, > 300 km. 34 and 155 Mb/s divide at 30 km and 100 km instead of 50 km. Prices for 2 Mb/s relate to 2,048 kb/s bit rate. 1,920 and 1,984 have different prices. Prices for 34 and 155 Mb/s circuits relate to circuits with one end in a major city (zone A), as defined by France Telecom. Local circuits within an exchange area are priced as a circuit of the given

distance. Additional definitions apply for higher speed circuits.

Ireland: EirCom define the tariff for leased lines with a local end charge, and main link charges for circuits 0 – 30 km and > 30 km. Local circuits may be made up by 2 local ends, and no main link. Circuits equal to or above 1 Mb/s have a distance incremental charge for local ends over 1.5 km.

Italy: All circuits have an access charge per end, and a main link distance related charge per km. Distance bands are 0 – 60 km, 60 – 300 km, and > 300 km. Circuits from 2 Mb/s and above are available with various levels of reduced charges depending on contract period and overall spend. The most basic level is used in this analysis. Local circuits within an exchange area are priced as two access circuits only.

Cyprus: CYTA divides the leased lines into: a) Subscriber segment, for access. b) Network segment, between exchanges, at distance bands of 0 – 20 km, 20 – 80 km, > 80 km. Local circuits within an exchange area are priced as two subscriber segments.

Latvia: Lattelekom circuits have the same price regardless of distance. Prices are only provided for circuits up to 2 Mb/s.

Lithuania: Lietuvos Telekomas distinguish between circuits inside the local exchange area, and those beyond the local exchange area.

Luxembourg: P&T Luxembourg divide the leased lines tariff into 4 types of circuits: Same local network, contiguous local network of same nodal sector, same nodal sector or contiguous local networks of different nodal sectors, and non-contiguous local networks of different nodal sectors. This definition relates to the network hierarchy, and not to distance. Distances at 200 km are not possible.

Hungary: Matav applies an access circuit charge for each end of the circuit, and a fixed basic charge and a per km charge for the trunk part.

Malta: Maltacom has a flat charge regardless of distance, only dependent of bitrate.

Netherlands: KPN Telecom offer leased lines as Digital Standard and DigiStream services. Digital Standard is the basic service, and the one used in this analysis. Tariffs are divided into a charge per connecting point and a main link charge. The main link charge is divided into two zones: Up to 50 km with a fixed basic charge and an incremental per km charge, and over 50 km with a fixed basic charge. Prices are in effect capped above 50 km. Prices for 34 and 155 Mb/s circuits are not published. Local circuits within an exchange area are priced as two access connections plus a short main link of the given distance.

Austria: Telecom Austria divides the "Digitaler Stromweg" circuits into 2 categories: City-tarif when both ends of the circuit are in category A cities (a defined list of 68 towns and cities), and Normal-tarif when the above does not apply. This analysis used the City-Tarif. The Normal-tarif would in most cases come out more expensive. For the years up to 2000 a different tariff scheme applied, with a different list of towns, and 3 instead of 2 categories. The tariff is based on a charge per local end, and a distance related charge per km. The distance bands vary with bit rate. Local circuits within an exchange area are priced as two access circuits only.

Poland: Polish Telecom have no recurring charges related to the access. A basic charge plus a per km charge is applied for the full length of the circuit. Distance bands are divided into 0 – 3 km, 3 – 20 km, 20 – 30 km, 30 – 50 km, 50 – 100 km, 100 – 200 km, over 200 km.

Portugal: Portugal Telecom divides the leased line tariff into local access circuit charge, and a main link with a fixed and an incremental charge per km. Distance bands are 0 – 10 km, 10 – 30 km, 30 – 50 km, 50 – 100 km, over 100 km. Local circuits connected to the same exchange will not incur main link charges. Local circuits within an exchange area are priced as two access circuits only.

Slovenia: Telekom Sloveije divides the leased line tariffs into 3 distance bands: 0 – 5 km, 5 – 50 km and over 50 km. Each of these bands have a basic price and a per km price. Distance is calculated between serving exchanges.

Slovakia: Slovak Telecom defines the leased line tariff in two parts: Local Access and Intercity. The Intercity part is divided into 3 distance bands: 0 – 50 km, 50 – 100 km and over 100 km. Prices are given for the 64 kb/s bitrate. Other bitrates between 9.6 kb/s and 2048 kb/s are calculated based on the 64 kb/s price using a multiplication factor. This factor is different for Local Access and Intercity circuit parts. For example 2048 kb/s has a factor of 4.4 for the Local Access and 5.6 for the Intercity part

Finland: Sonera stopped publishing full 64 kb/s circuit prices in 1998, and have also stopped publishing 2 Mb/s circuit prices. Local circuit charges were divided into 3 categories: Urban area, Rural areas I and II. Definitions of these areas relate to individual locations in the Sonera coverage area. Long distance (main link) charges were also divided into 3 categories: Green, Red and Blue. Green covers the main 5 cities, red a further 28 towns, and Blue the rest of the countries. Distance bands are 0 – 50 km, 50 – 100 km, and > 100 km. Incremental charges per km applied.

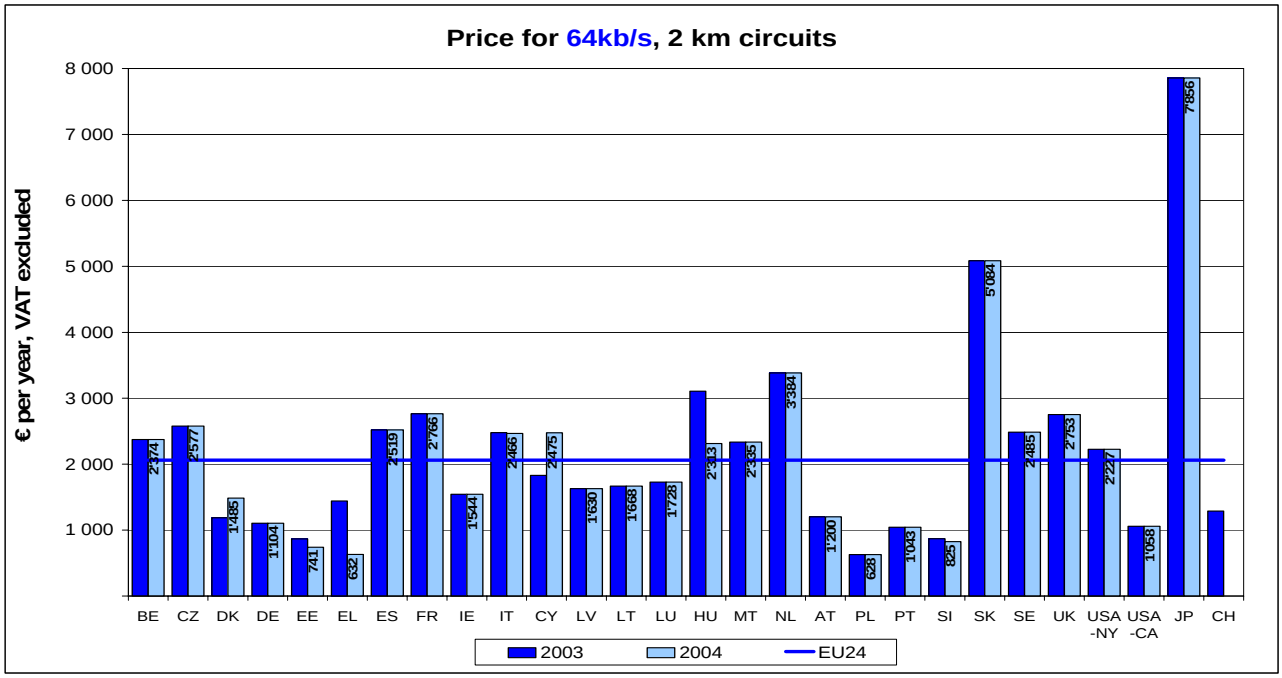
Sweden: Telia divides their network into 5 categories: Metropolitan green and green for the major cities and towns, red and blue for short distance network in smaller places, and white for rural areas. Circuits are priced according to the portion of the circuit falling into any of these categories on its route. Here the green tariff is assumed, for a circuit between reasonably large towns. The tariff is divided into local circuits and long distance. Long distance circuits will have a separate access link charge per end, and a main link charge. Local circuits are priced in 2 distance bands: 0 – 0.5 km and 0.5 - 3 km. Long distance circuits are priced in the bands 0 – 20 km, 20 – 40 km, and > 40 km. The latter has an incremental per km charge. Circuits at 34 Mb/s and 140/155 Mb/s are no longer offered by Telia.

Instead other services are offered, as complete network solutions.

United Kingdom: BT divides their Kilostream (64 kb/s) and Megastream (2, 34 and 155 Mb/s) tariffs into circuits wholly within City London Zone (0207-area), and circuits with one or both ends outside London. For local circuits within CLZ the main link does not apply since both ends are connected to the same exchange (according to the definition used). The price is calculated as the sum of two local access circuits. Distance bands outside London are < 15 km and > 15 km. Incremental charges per km applies.

9.1.1. 64 Kbit/s

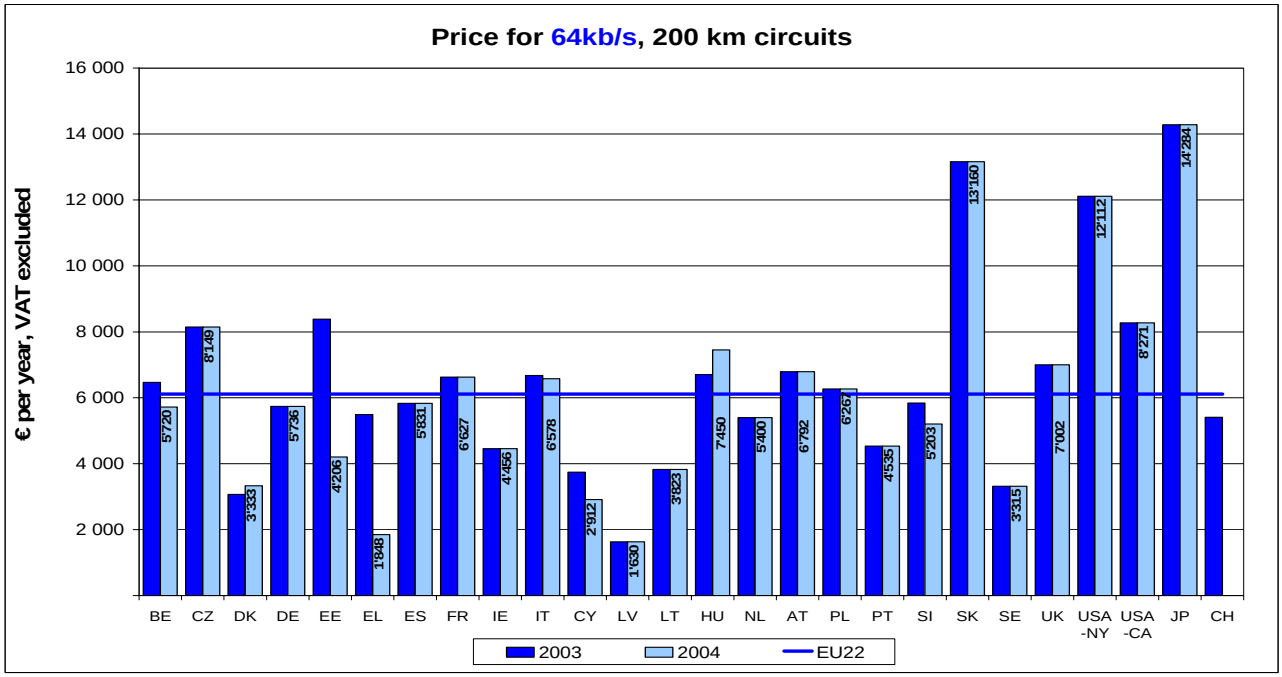
Figure 112



2004 data for Finland not available.

Source for Switzerland: Teligen T-Basket; OFCOM Switzerland computation.

Figure 113

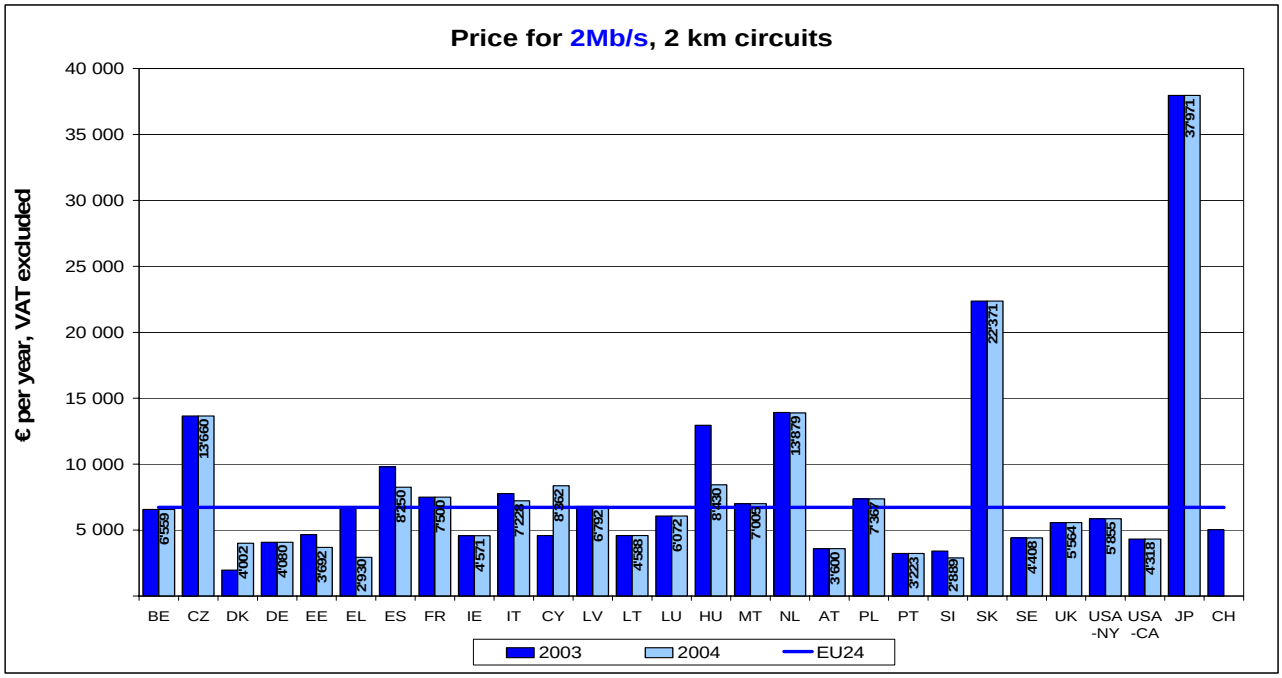


2004 data for Finland not available.

Source for Switzerland: Teligen T-Basket; OFCOM Switzerland computation.

9.1.2. 2 Mbit/s

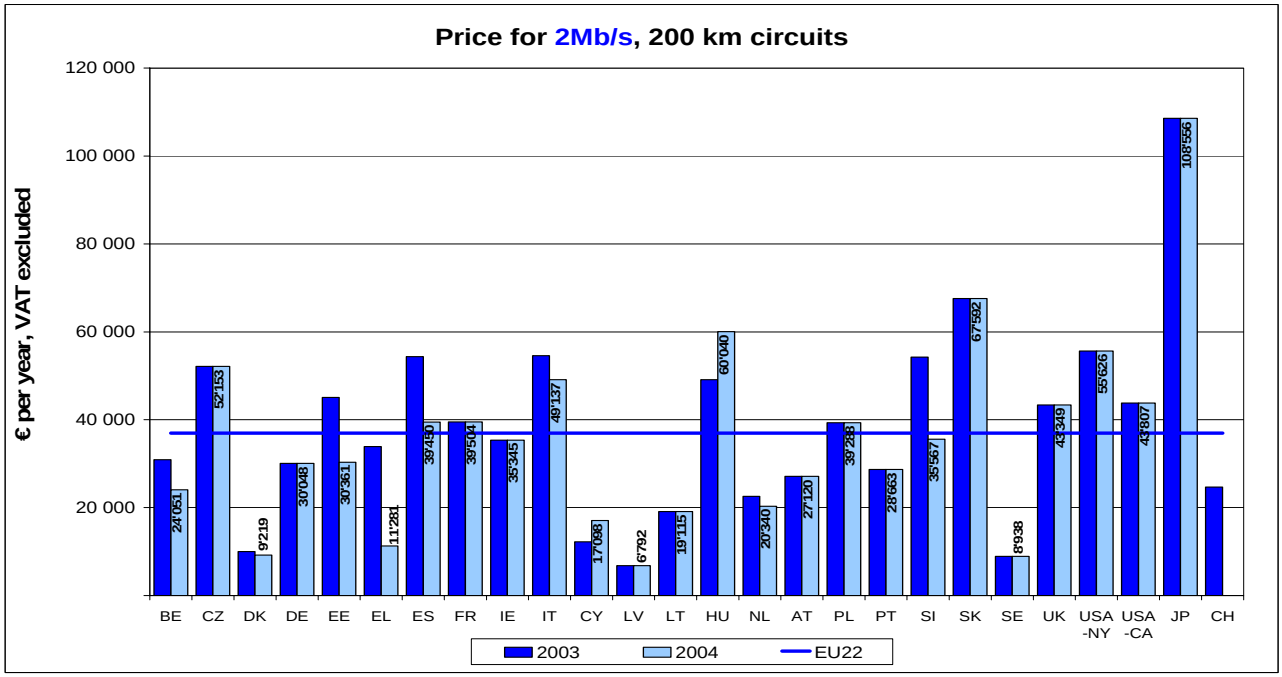
Figure 114



2004 data for Finland not available.

Source for Switzerland: Teligen T-Basket; OFCOM Switzerland computation.

Figure 115

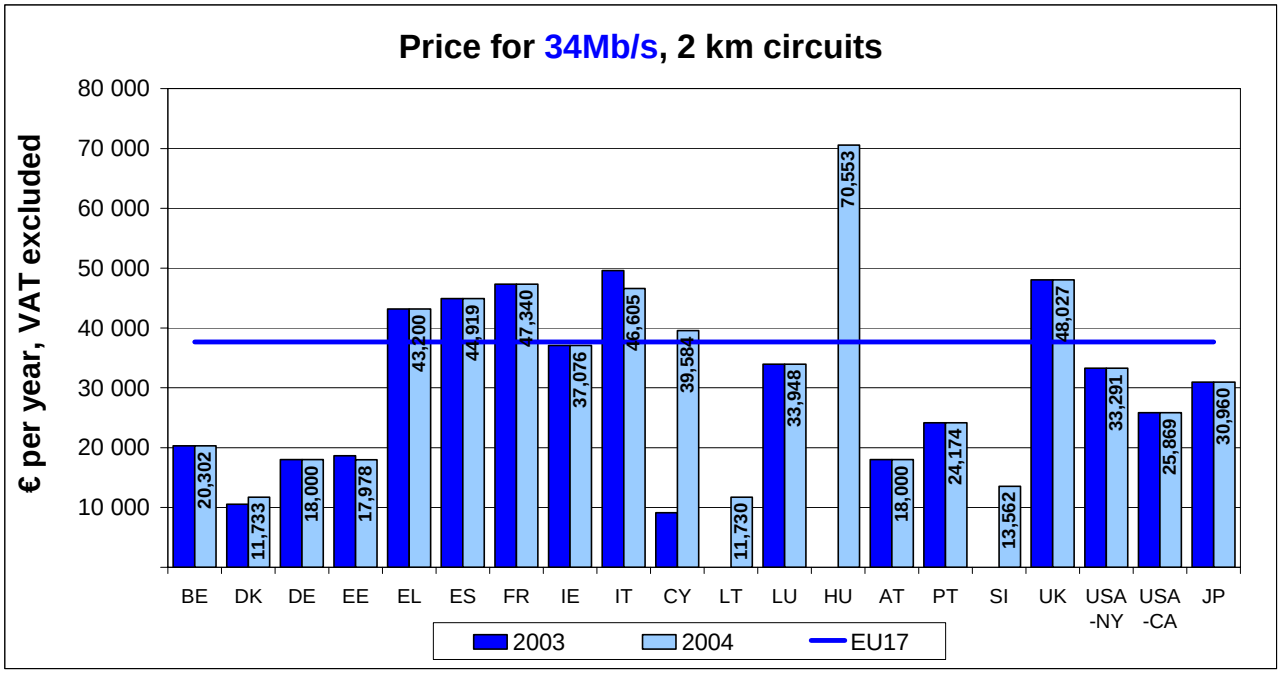


2004 data for Finland not available.

Source for Switzerland: Teligen T-Basket; OFCOM Switzerland computation.

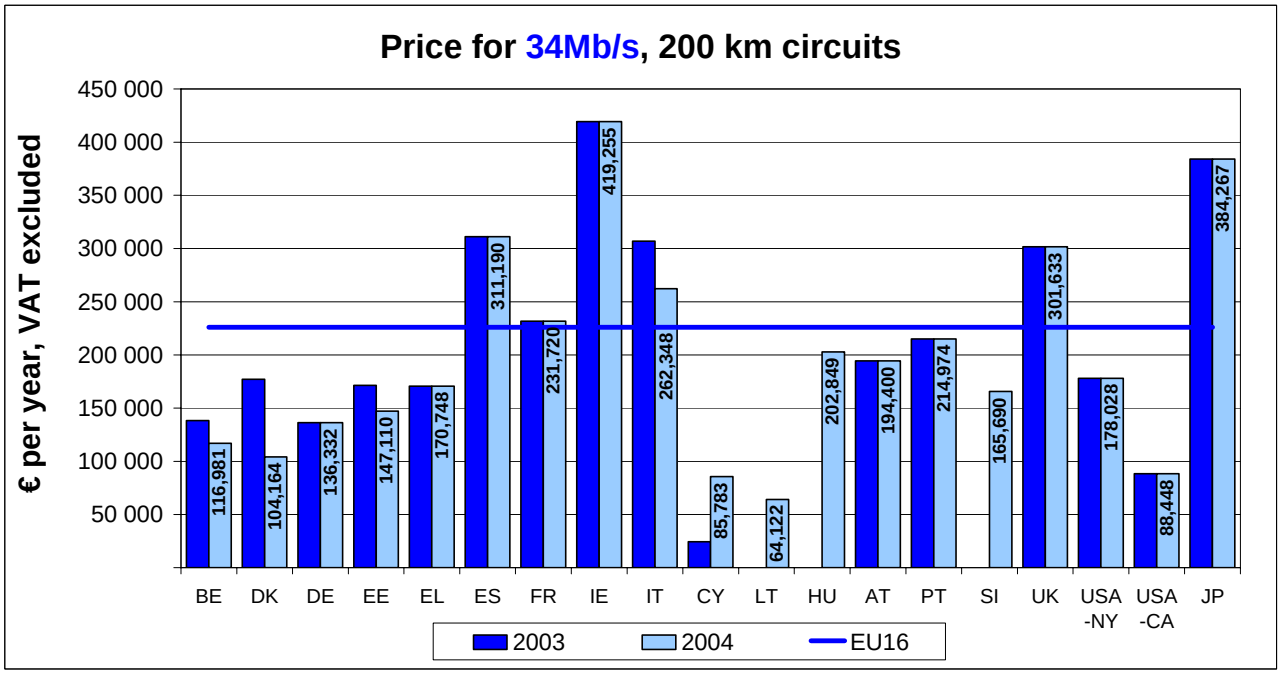
9.1.3. 34 Mbit/s

Figure 116



- 2004 data for Czech Republic, Latvia, Malta, the Netherlands, Poland, Slovakia, Finland and Sweden not available.

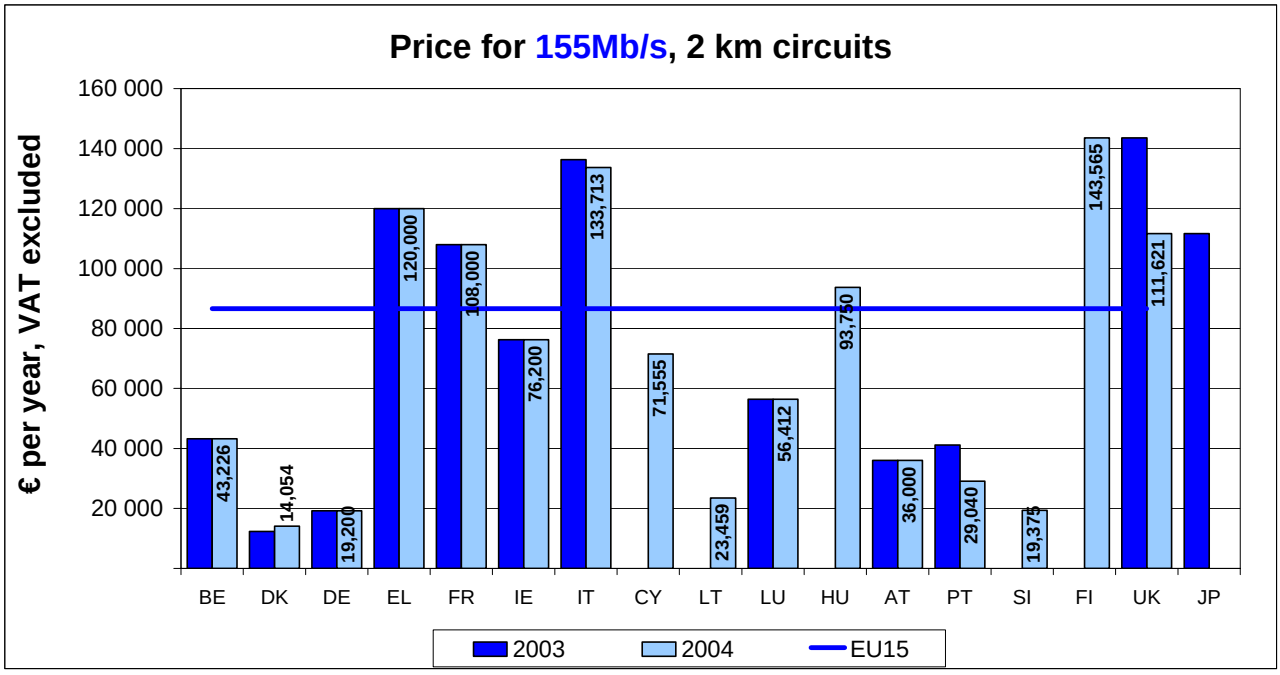
Figure 117



- 2004 data for Czech Republic, Latvia, the Netherlands, Poland, Slovakia, Finland and Sweden not available.

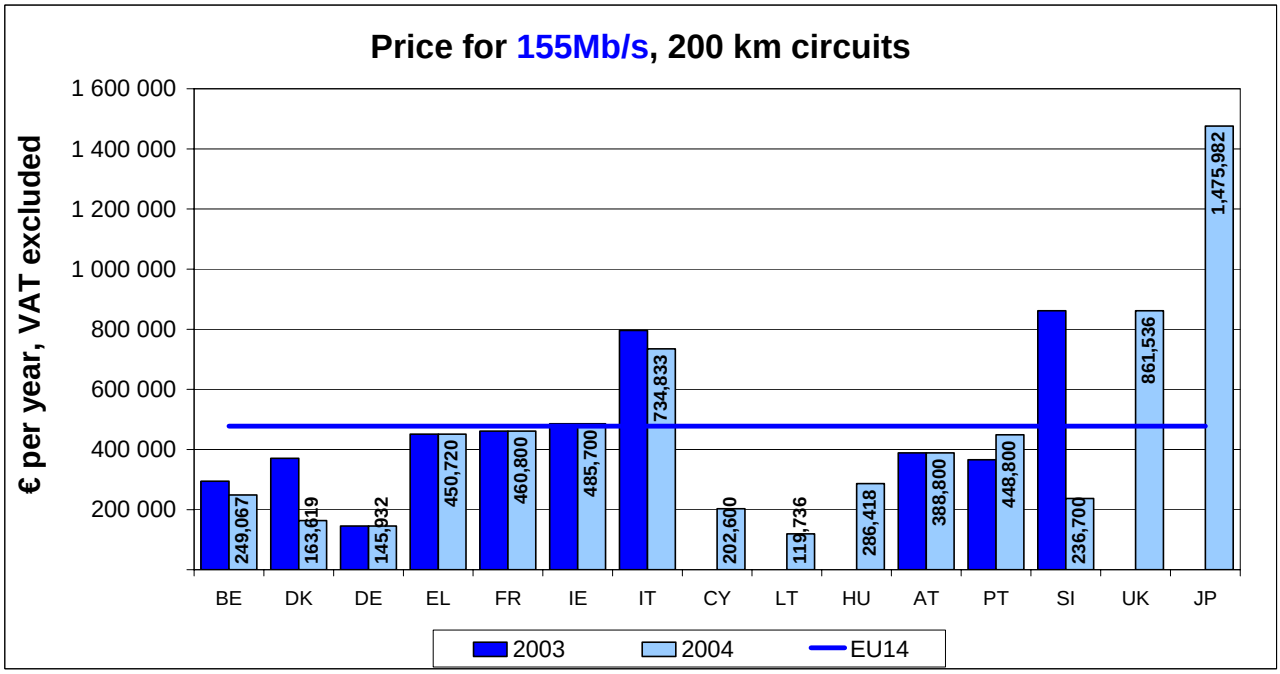
9.1.4. 155 Mbit/s

Figure 118



- 2004 data for Czech Republic, Estonia, Spain, Latvia, Malta, the Netherlands, Poland, Slovakia, Finland and Sweden not available.

Figure 119



- 2004 data for Czech Republic, Estonia, Spain, Latvia, the Netherlands, Poland, Slovakia, Finland and Sweden not available.

9.2. NATIONAL LEASED LINES PRICE TRENDS (1 AUGUST 1998 - 1 AUGUST 2003)

Figure 120

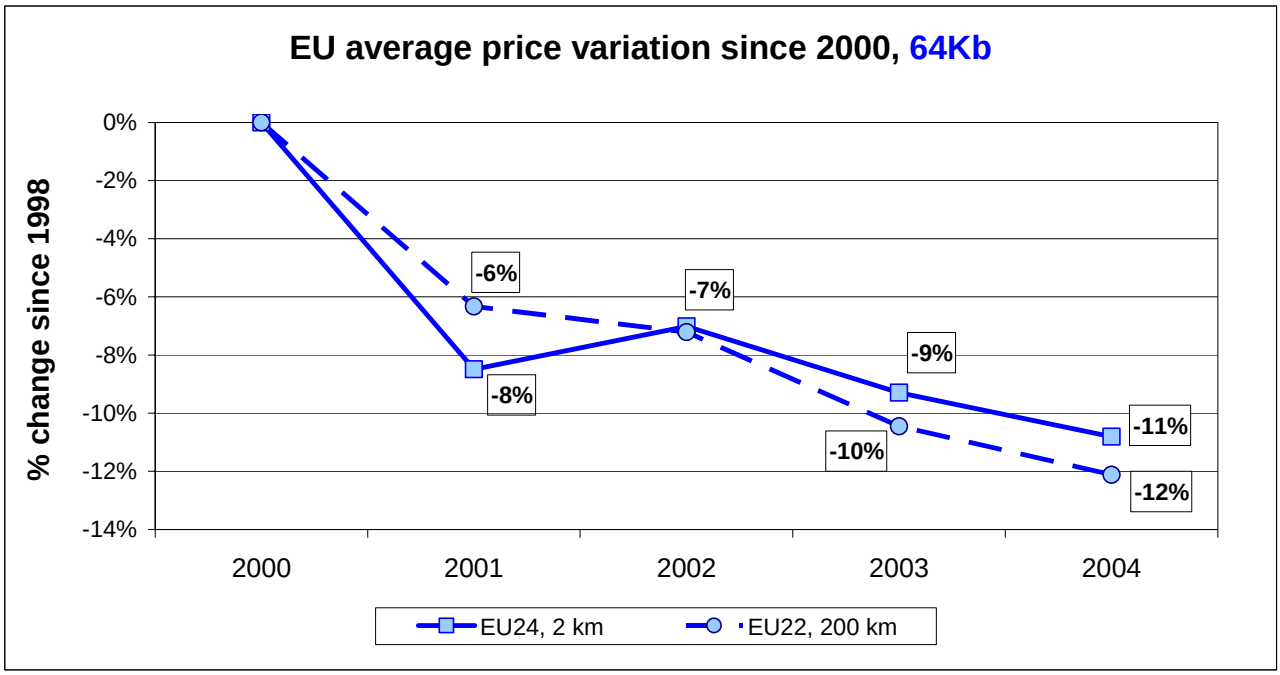
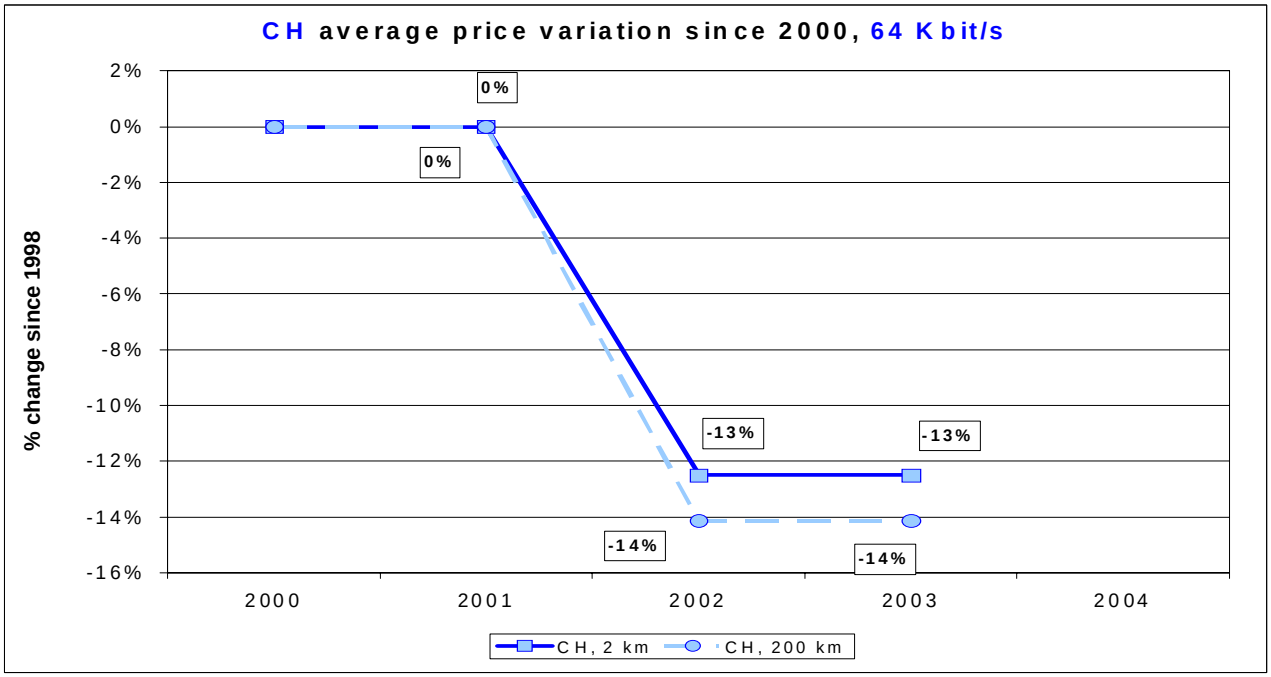


Figure 120a



Source for Switzerland: Teligen T-Basket; OFCOM Switzerland computation.

Figure 121

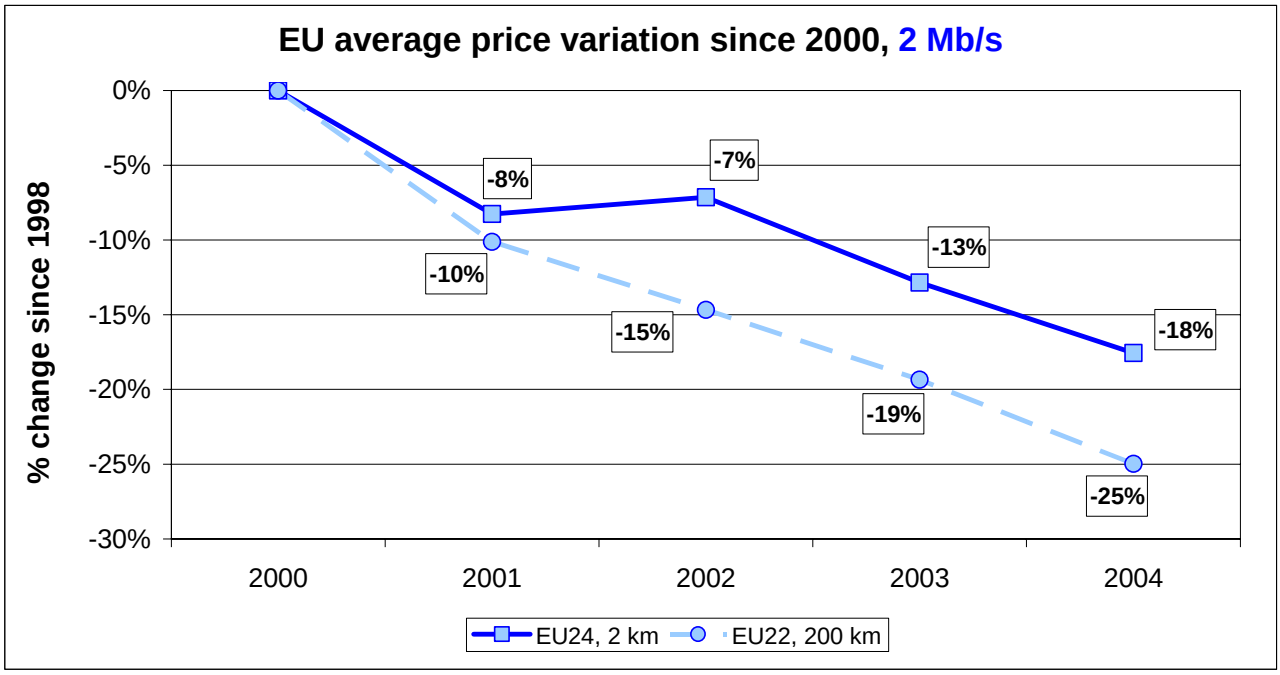
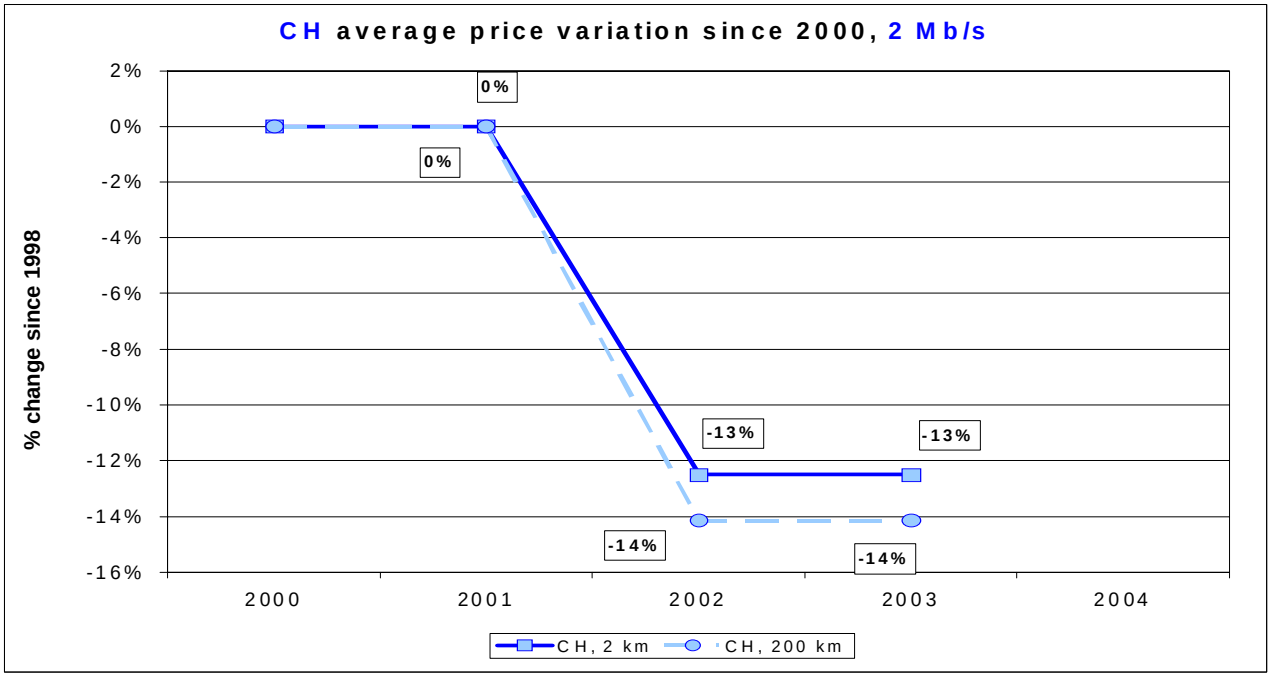
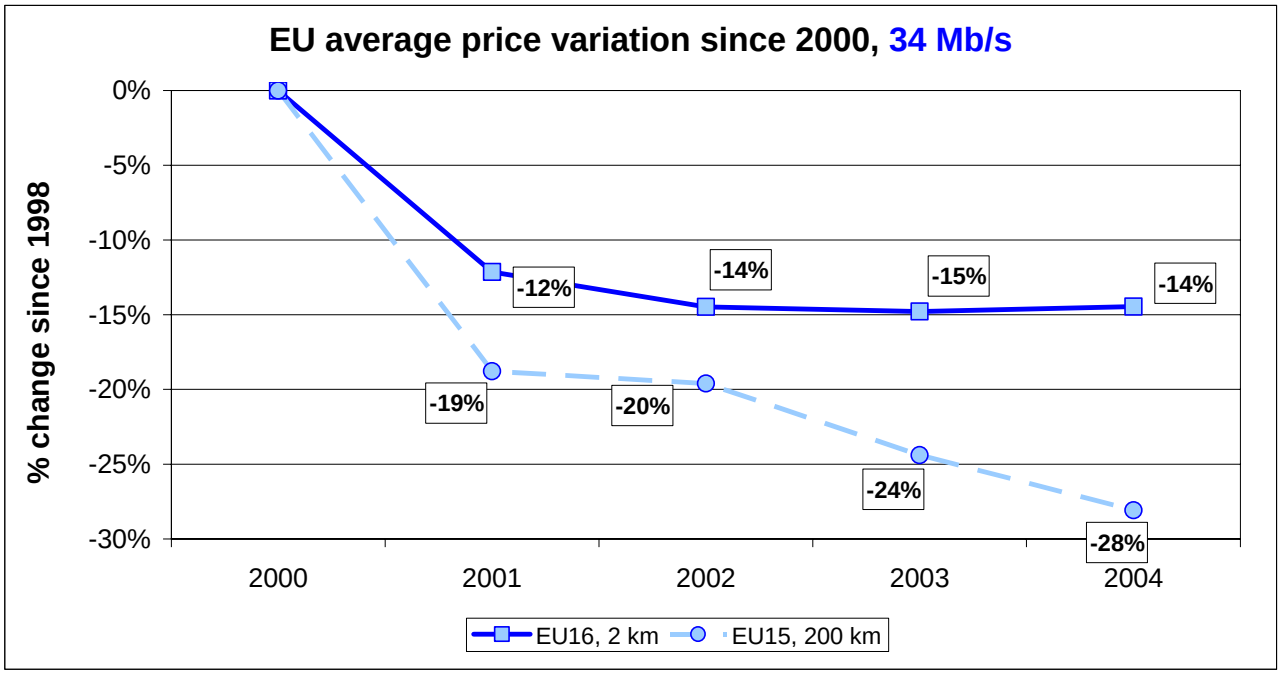


Figure 121a



Source for Switzerland: Teligen T-Basket; OFCOM Switzerland computation.

Figure 122



9.3. INTERNATIONAL LEASED LINES PRICES

This section examines the standard retail prices (annual rental) for international leased line services (half-circuits in each country) charged by the incumbent operators in each Member State. An analysis of the price development over the period from August 2000 to August 2004 is also included.

Three destinations are covered: international half circuits to the nearest EU country (hereafter "near EU"), to the most distant EU country ("far EU") and to the USA.

Three types of circuits are considered: digital 64 Kbit/s, 2 Mbit/s and 34 Mbit/s. Given that price information on 155 Mbit/s international lines is only available for a few Member States, the analysis of these circuits is omitted.

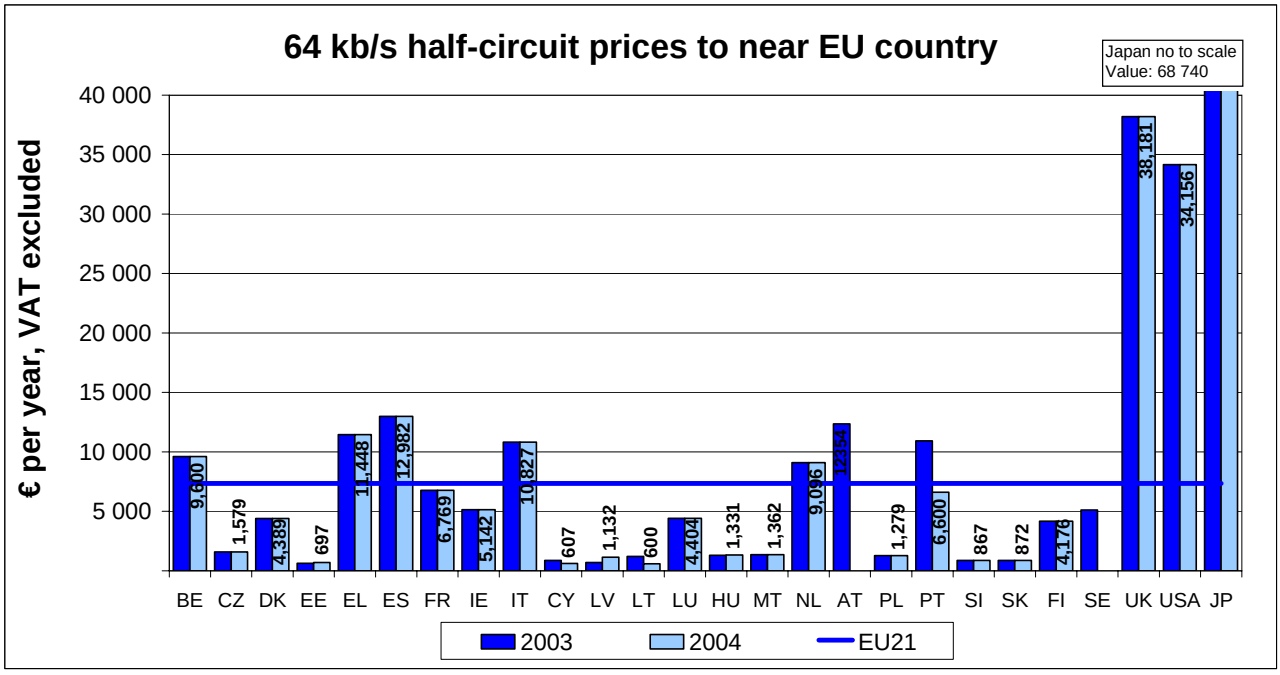
The data is presented with the following parameters:

- All charges in Euro per month
- Excluding VAT
- The years from 2000 are covered
- Variable / 1 year contract (shortest term available).
- AT&T prices are used for USA

The analysis shows that the prices of international half-circuit from all of the New Member States are much lower than from the EU15 countries, with a factor of around 1:6.

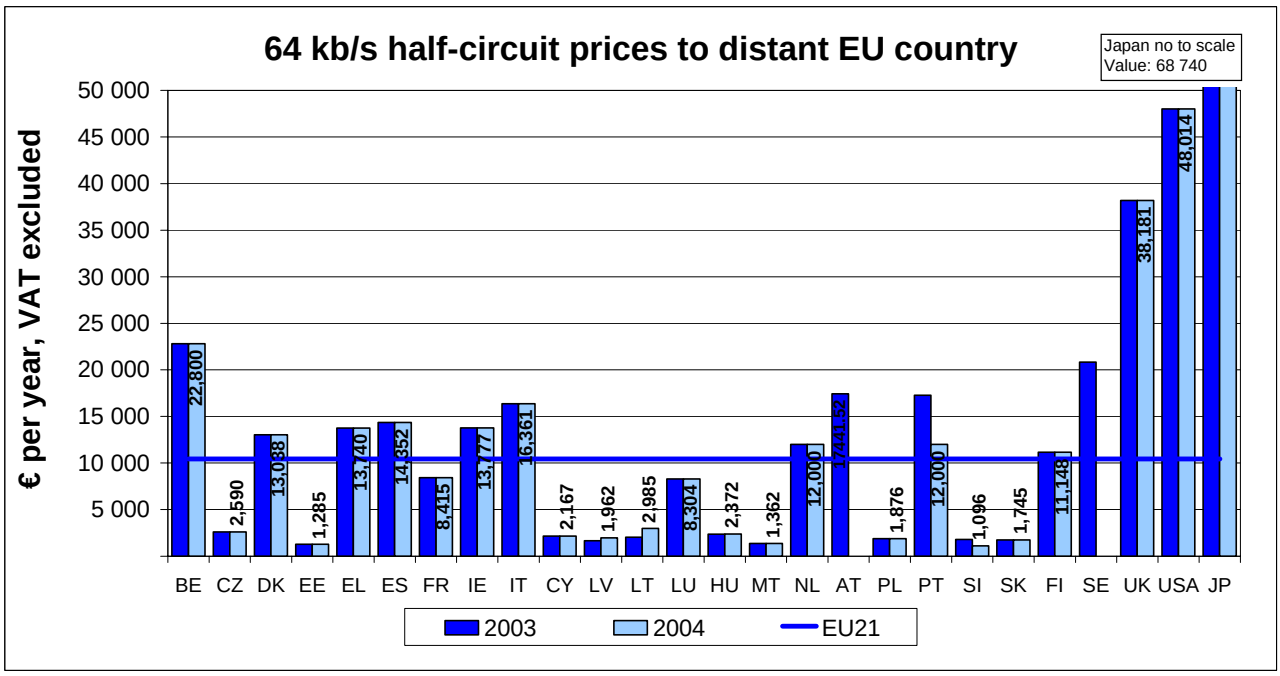
9.3.1. 64 Kbit/s

Figure 123



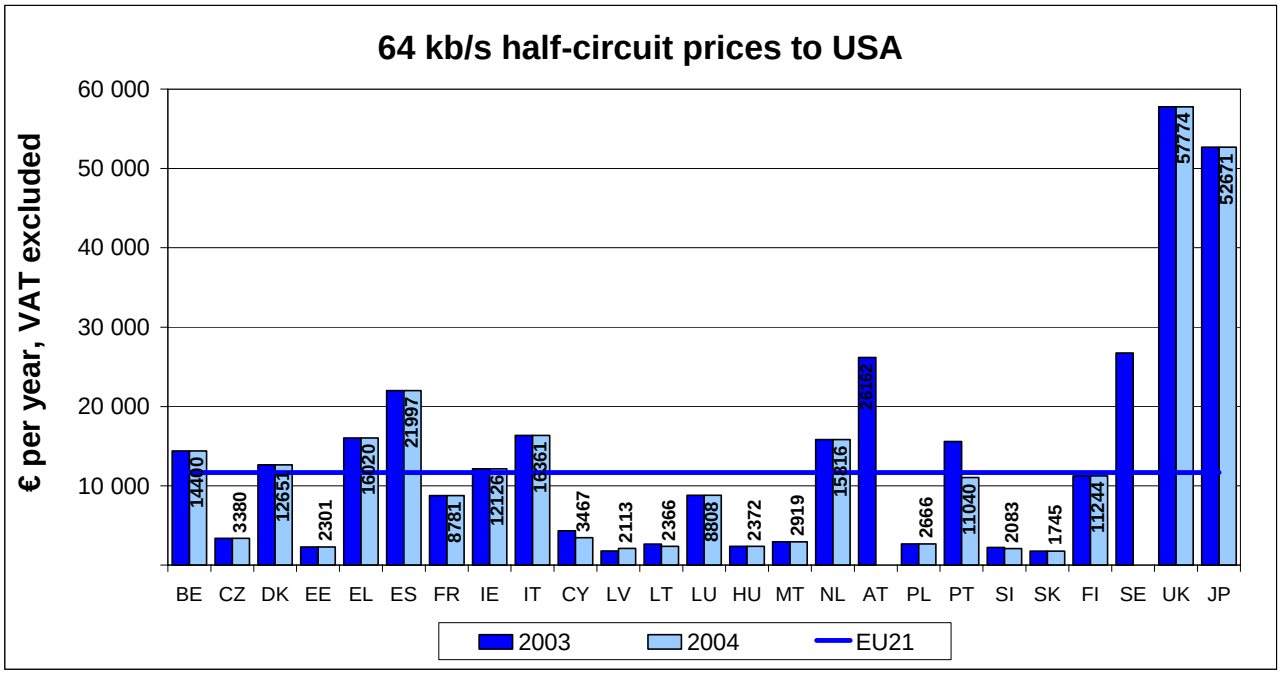
- 2004 data for Germany, Austria and Sweden not available.
- UK prices refer to the so-called "Baseline prices", which are used as a basis for any discounts applied. UK is not included in the EU average.

Figure 124



- 2004 data for Germany, Austria and Sweden not available.
- UK prices refer to the so-called "Baseline prices", which are used as a basis for any discounts applied. UK is not included in the EU average.

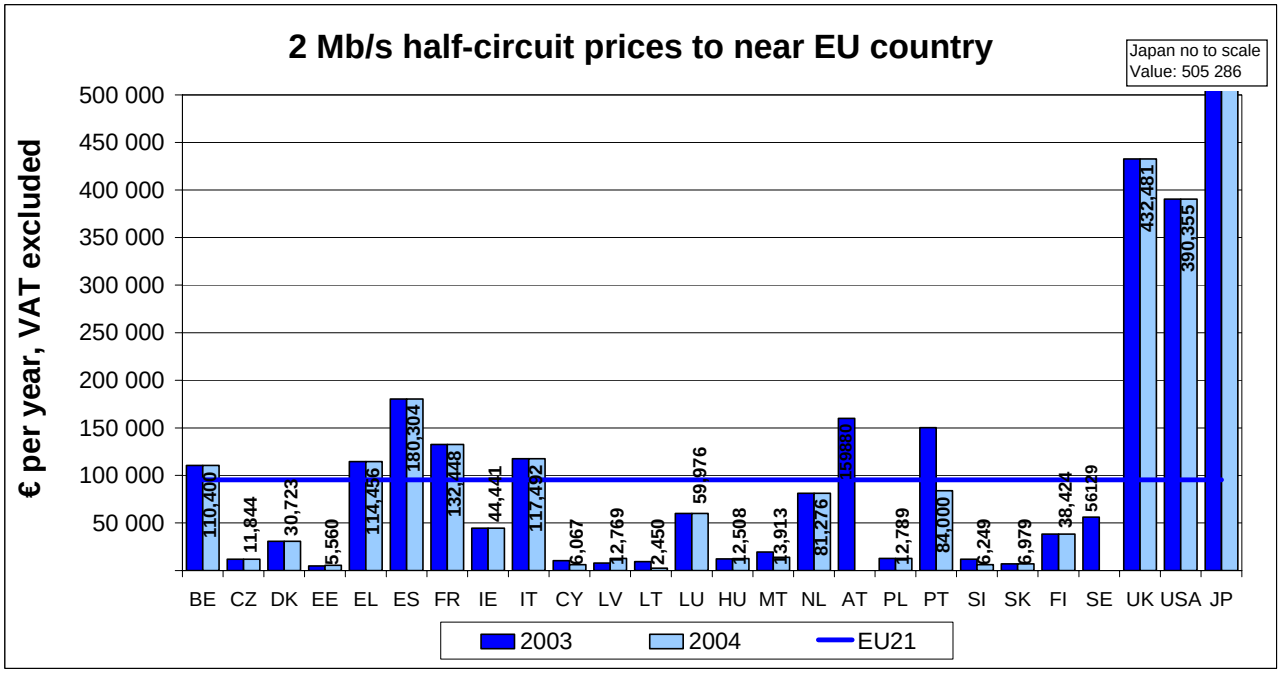
Figure 125



- 2004 data for Germany, Austria and Sweden not available.
- UK prices refer to the so-called "Baseline prices", which are used as a basis for any discounts applied. UK is not included in the EU average.

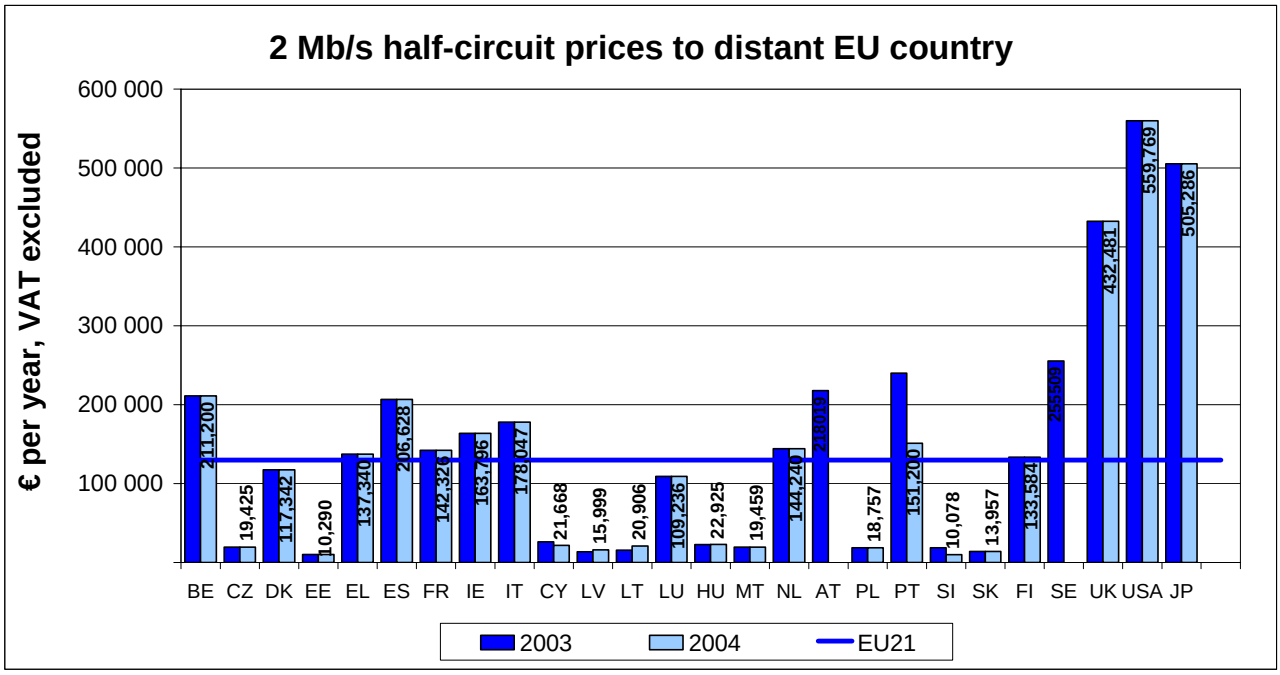
9.3.2. 2 Mbit/s

Figure 126



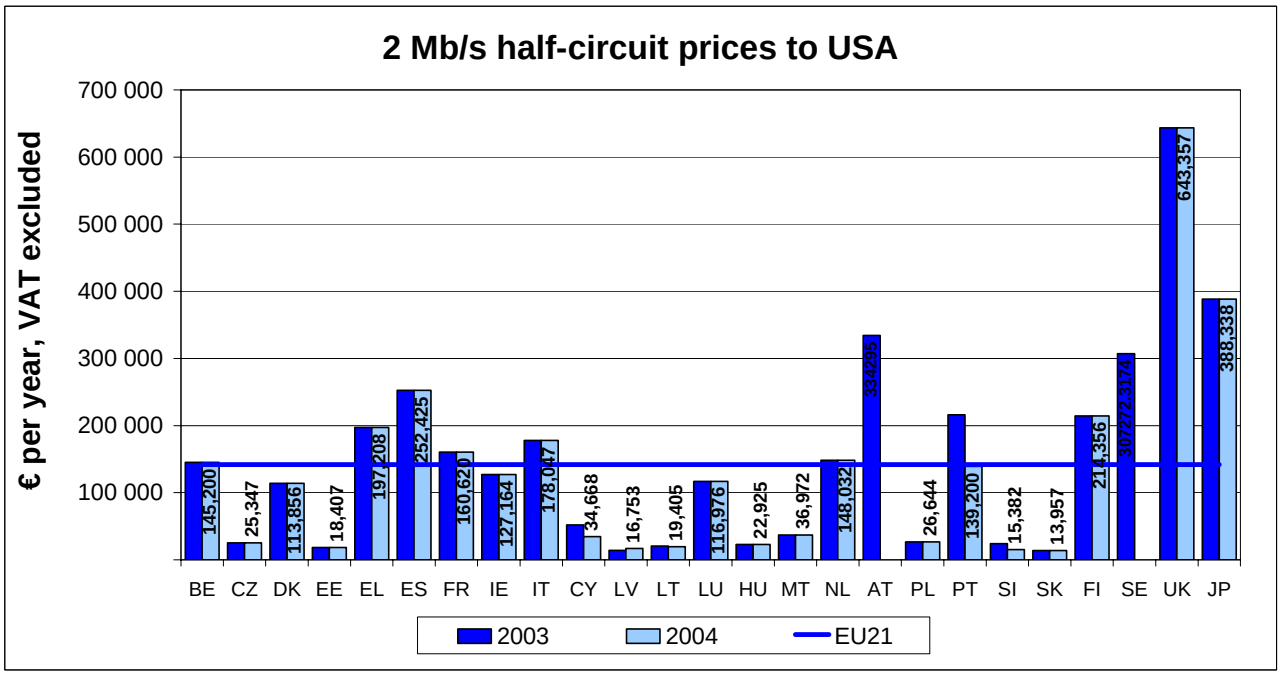
- 2004 data for Germany, Austria and Sweden not available.
- UK prices refer to the so-called "Baseline prices", which are used as a basis for any discounts applied. UK is not included in the EU average.

Figure 127



- 2004 data for Germany, Austria and Sweden not available.
- UK prices refer to the so-called "Baseline prices", which are used as a basis for any discounts applied. UK is not included in the EU average.

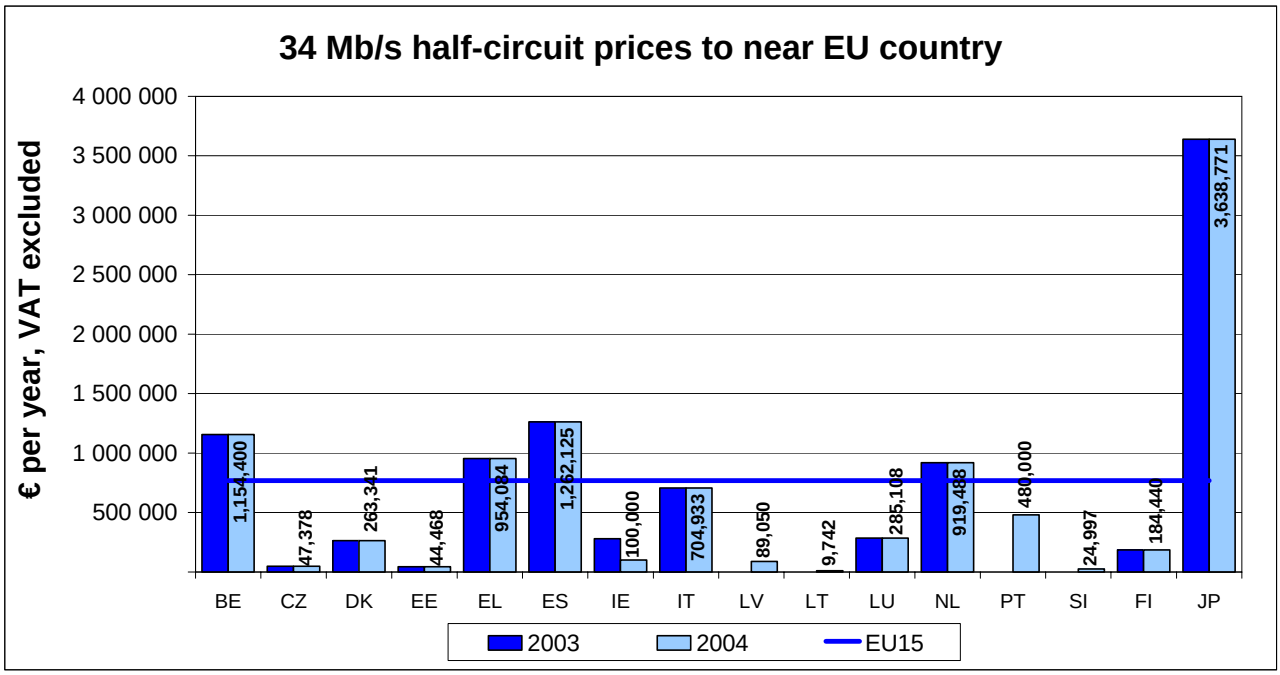
Figure 128



- 2004 data for Germany, Austria and Sweden not available.
- UK prices refer to the so-called "Baseline prices", which are used as a basis for any discounts applied. UK is not included in the EU average.

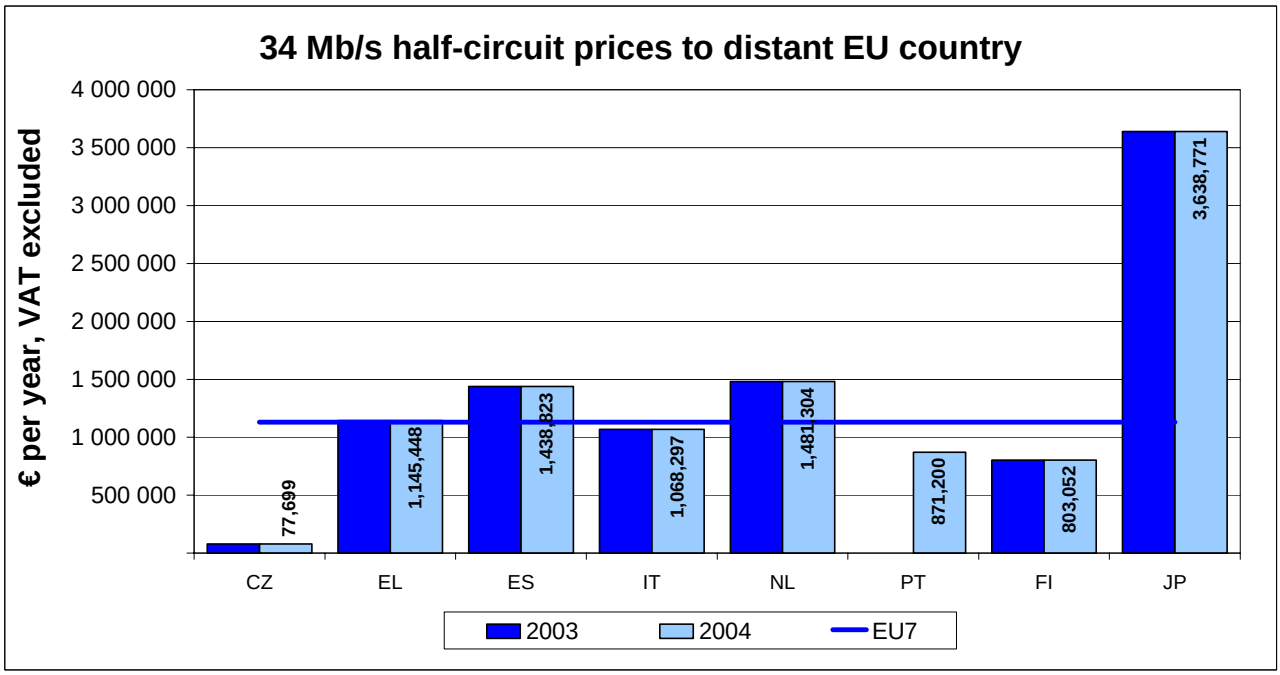
9.3.3. 34 Mbit/s

Figure 129



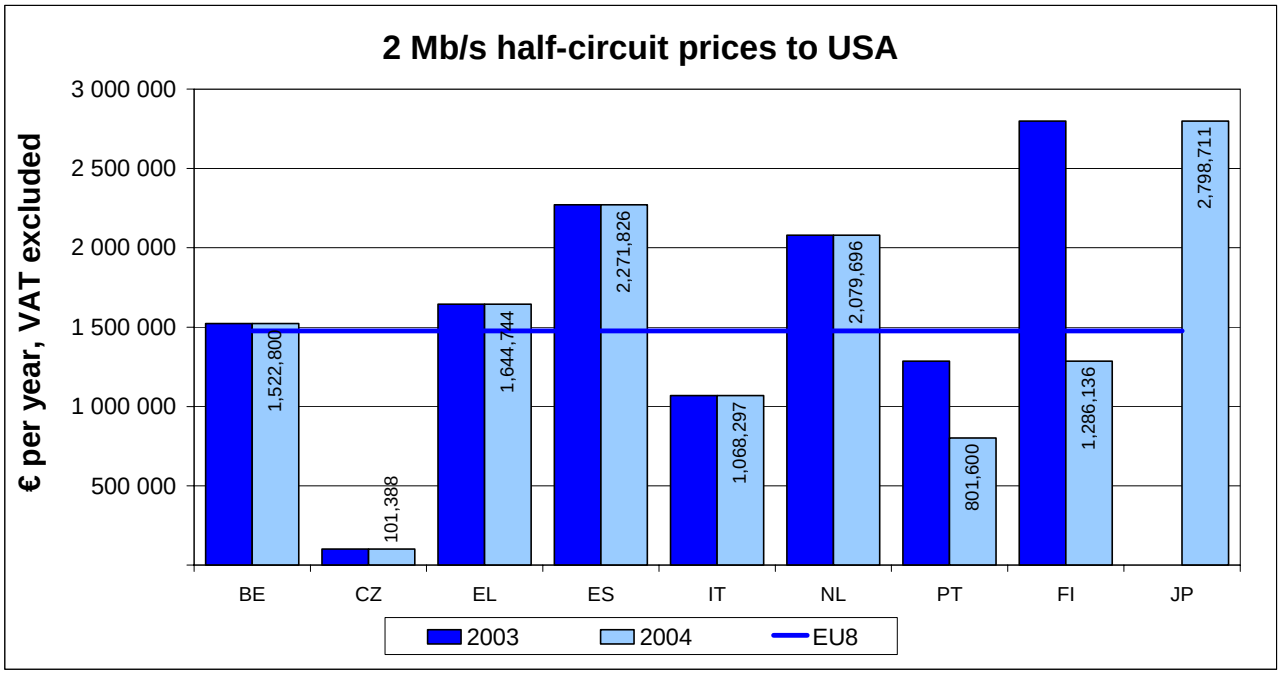
- 2004 data for Germany, France, Cyprus, Hungary, Malta, Austria, Poland, Slovakia, Sweden, United Kingdom and USA not available.

Figure 130



- 2004 data for Belgium, Denmark, Germany, Estonia, France, Ireland, Cyprus, Latvia. Lithuania, Luxembourg, Hungary, Malta, Austria, Poland, Slovenia, Slovakia, Sweden, United Kingdom and USA not available.

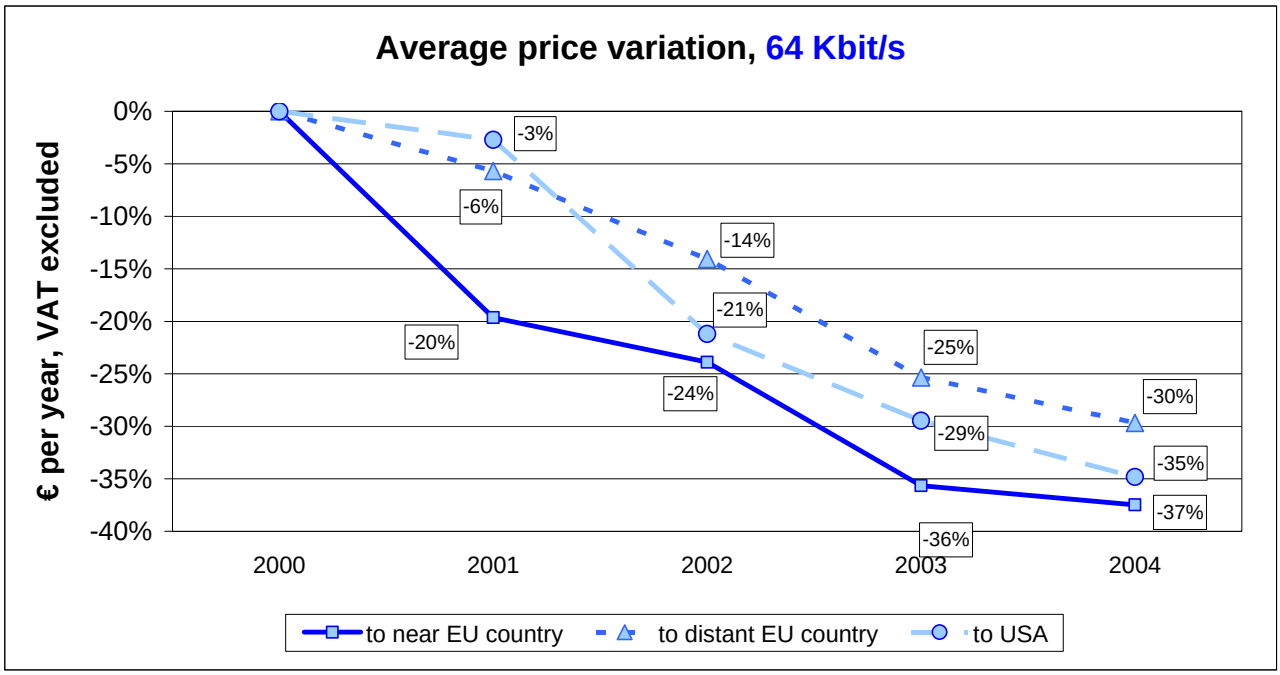
Figure 131



- 2004 data for Denmark, Germany, Estonia, France, Ireland, Cyprus, Latvia. Lithuania, Luxembourg, Hungary, Malta, Austria, Poland, Slovenia, Slovakia, Sweden and United Kingdom not available.

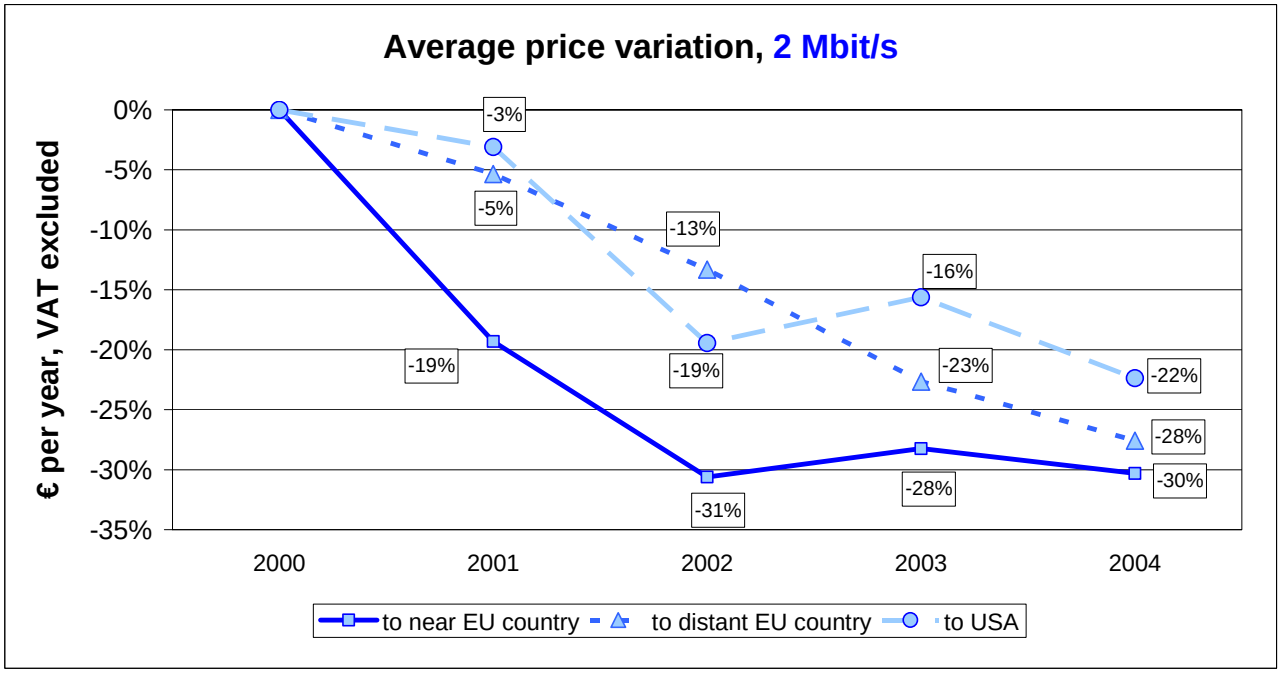
9.4. INTERNATIONAL LEASED LINES PRICE TRENDS (1 AUGUST 1998 - 1 AUGUST 2003)

Figure 132



UK is not included in the EU average from 2003, due to BT change to "Baseline prices".

Figure 133



UK is not included in the EU average from 2003, due to BT change to "Baseline prices".

10 EXCHANGE RATES

10.1. EXCHANGE RATE USED IN SECTION 5 ON THE MOBILE BASKET, SECTION 8 ON PUBLIC VOICE TELEPHONY TARIFFS AND SECTION 9 ON LEASED LINE TARIFFS.

	EURO
Belgium	1
Czech Republic	0.03159
Denmark	0.13447
Germany	1
Estonia	0.06391
Greece	1
Spain	1
France	1
Ireland	1
Italy	1
Cyprus	1.73340
Latvia	1.50932
Lithuania	0.28962
Luxembourg	1
Hungary	0.00401
Malta	2.33508
Netherlands	1
Austria	1
Poland	0.22736
Portugal	1
Slovenia	0.00417
Slovakia	0.02492
Finland	1
Sweden	0.10997
UK	1.46424
Japan	0.00744
USA	0.81324
CH	**0.65274**

Source for Switzerland: Teligen T-Basket, 25.08.2004.

10.2. EXCHANGE RATE USED IN ALL THE OTHER SECTIONS

Belgium	1
Czech Republic	0.031628
Denmark	0.134479
Germany	1
Estonia	0.063912
Greece	1
Spain	1
France	1
Ireland	1
Italy	1
Cyprus	1.725328

Latvia	1.528117
Lithuania	0.28962
Luxembourg	1
Hungary	0.004021
Malta	2.354603
Netherlands	1
Austria	1
Poland	0.228269
Portugal	1
Slovenia	0.004167
Slovakia	0.024953
Finland	1
Sweden	0.10853
UK	1.515037
CH	**0.65274**
SOURCE: OJ C196/1 OF 3.8.2004	

Source for Switzerland: Teligen T-Basket, 25.08.2004.

11 OECD TELECOMMUNICATIONS BASKET DEFINITIONS

11.1. NATIONAL PSTN BASKET

Business basket results exclude VAT. Residential basket results include VAT.

The non-recurring charge is calculated as an average between the charge for a new line installation, and the charge for "same day takeover", i.e. when there is a direct transfer from the previous to the new customer. Valid for both Business and Residential baskets.

Non-recurring charge calculation	Weight
New line connection charge	50%
Same day takeover connection charge	50%

The non-recurring charge is depreciated over 5 years. An exception is made for countries where the connection charge has a lifetime value (e.g. Japan, where the connection is a tradable asset). Valid for both Business and Residential baskets.

Non-recurring charge depreciation	Weight
With normal one-off charge	5
Where connection is a tradable asset	20

Annual rental for the service is included in the basket. Any additional recurring charges (per year) shall also be included (e.g. charges related to the use of specific calling plans).

Where the service (or tariff plan) includes a number of "free" calls or minutes, or any other call-related allowance, the value of this allowance is deducted from the usage. The value of the deducted allowance cannot be higher than the usage. Where the tariff clearly specifies that the allowance is related to specific types of calls (e.g. local, international), the usage in question shall only cover the defined type(s) of calls.

The number of calls to fixed line phones (i.e. excluding calls to mobile phones) is defined as:

Number of national fixed line calls	Calls per year
Business basket	3600
Residential basket	1200

The national usage will have a weighted distribution over 14 distances. Call charges relevant at each of these distances shall be used.

Km	**3**	**7**	**12**	**17**	**22**	**27**	**40**	**75**	**110**	**135**	**175**	**250**	**350**	**490**
Bus	53	11	7	4	2.5	3	3.5	3.5	2.5	2	1.5	1.5	1	4
Res	60	14	5	3	1.5	2.5	2.5	2.5	1.5	1.25	1	1	0.75	3.5

Bus = Business basket, Res = Residential basket. All weights in percent of total number of fixed line calls.

The national usage will have a weighted distribution over six time and day points. Call charges relevant at each of these time and day points shall be used.

Day/Time	We 11:00	We 15:00	We 20:00	We 03:00	Sa 11:00	Su 15:00
Bus	45.4	40.6	7	0.8	5.7	0.5
Res	14.3	22.1	31.6	3	13	16

Bus = Business basket, Res = Residential basket. All weights in percent of total number of fixed line calls.

We = Weekdays, Sa = Saturdays, Su = Sundays.

National call duration will vary with distance and time of day. The charge for each call shall reflect the actual charge for the duration in question, as defined by the tariff. Call setup and minimum charges shall be included.

Day/Time	**Weekday daytime**			**Weekday evenings, nights and weekends**		
Distance	3-12 Km	17-40 Km	75-490 km	3-12 km	17-40 Km	75-490 Km
Bus	3.5	3.5	3.5	3.5	3.5	3.5
Res	2.5	3.5	3.5	3.5	6	7

Bus = Business basket, Res = Residential basket. Duration in minutes per call.

Calls to mobile phones may be added to the basket. This is optional, and the presentation of the results must clearly state whether such calls are included or not. The number of calls shall be 10% of the number of national fixed line calls, in addition to the fixed line calls.

Calls to mobile phones	**Calls per year**	**Call duration**
Business basket	360	2
Residential basket	120	2

Call duration in minutes per call.

11.2. INTERNATIONAL PSTN BASKET

The international PSTN basket, when used separately, shall reflect the cost of a single call, calculated according to the weighting method described below. No fixed charges are included.

Business basket results exclude VAT. Residential basket results include VAT.

Call charges for calls to all other OECD Member States shall be used. Peak and off-peak time call charges are used, defined as the highest (most expensive) charge and the lowest (least expensive) charge.

Call cost is based on average per minute charge. Call setup charges and/or different charges for first and additional minutes are included.

The charges to different destinations are weighted according to the ITU call volume statistics. An average over the latest 5 years of available traffic statistics is used. As there may be gaps in the ITU statistics for certain destinations from some countries, calls on such routes are excluded from the calculation.

Call charges are weighted between peak and off-peak:

	Peak time weight	**Off-peak time weight**
Business basket	75.0 %	25.0 %
Residential Basket	25.0 %	75.0 %

Call duration differ between peak and off-peak time:

	Peak time	**Off-peak time**
Business basket	3 minutes	5 minutes
Residential Basket	3 minutes	5 minutes

11.3. COMPOSITE NATIONAL – INTERNATIONAL BASKET

This basket is based on a combination of the national and international baskets, as described above. The national basket remains unchanged, and the international basket is scaled using a fixed number of international calls.

Business basket results exclude VAT. Residential basket results include VAT.

The international portion of the basket shall have a number of calls equal to 6% of the national fixed line calls, in addition to the calls defined in the national portion of the basket.

	International calls per year
Business basket	216
Residential basket	72

11.4. NEW OECD MOBILE BASKETS

All baskets will include:

Registration or installation charges with 1/3 of the charges, *i.e.* distributed over 3 years.

Monthly rental charges, and any option charges that may apply to the package, or package combination.

The three new baskets are:

Low user basket. The usage level of this basket is low, with a call volume less than half of that in the Medium user basket.

Medium user basket. This basket will have 75 outgoing calls per month.

High user basket. The usage level is about twice the Medium user basket.

The usage profiles will also include a number of SMS messages per month.

Call and message volumes for each basket are:

	Outgoing calls /month	SMS per month
Low user	25	30
Medium user	75	35
High user	150	42

The information received showed that there is little difference between the average pre-paid usage and the low user post-paid usage. The low user basket can therefore be used for both pre- and post-paid tariffs, allowing a simple comparison also between the two types.

Only national calls are included in the profiles, with 4 different destinations:

Local area fixed line calls. This is used to accommodate the tariffs that have separate charges for the local area. When such charges are not available, this proportion of calls is included in the National.

National fixed line calls. This covers all fixed line calls outside the local area, except in cases as noted above.

Same network mobile calls (On-net). This includes all calls made to mobiles in the same mobile network as the caller.

Other network mobile calls (Off-net). This includes calls to all other mobile networks in the caller's country. When the charges are different depending on destination network, the market shares based on subscriber numbers are used for weighting the charges. Up to 3 other networks will be considered in each country.

Distributions per destination for each basket are:

% of total number of calls	Fixed Local area	Fixed National area	On-net mobile	Off-net mobile
Low user	28.0%	14.0%	40.0%	18.0%
Medium user	24.0%	12.0%	43.0%	21.0%
High user	26.0%	14.0%	42.0%	18.0%

As the information received produced little evidence on the split between local and national fixed line calls, the assumption has been used that the ratio would be 2:1 for local:national, i.e. 67% local and 33% national. This assumption is taken from the averages in fixed baskets, and the scarce information received.

Instead of splitting time and day into distinct times and days the following approach will be used:

Peak time calls at weekdays, most expensive time during daytime.

Off-peak time calls at weekdays, cheapest time before midnight.

Weekend time calls, at daytime Sundays.

Distributions over time and day for each basket are:

% of total number of calls	ToD Peak	ToD Off-peak	ToD Weekend
Low user	38.0%	35.0%	27.0%
Medium user	47.0%	30.0%	23.0%
High user	63.0%	22.0%	15.0%

There will be 3 separate call durations:

Local and national fixed line calls

Same network mobile calls (On-net)

Other network mobile calls (Off-net)

Call durations for each basket are:

Minutes per call	Dur Fixed National	Dur Mobile On-net	Dur Mobile Off-net
Low user	1.6	1.4	1.4
Medium user	2.1	1.9	1.9
High user	2.2	2.0	2.1

Any call allowance value included in the monthly rental will be deducted from the usage value once the basket is calculated. The deduction cannot be larger than the actual usage value, i.e. negative usage is not allowed. No transfer of unused value to next month is taken into account.

Any inclusive minutes will be deducted from the basket usage before starting the calculation of usage cost. The inclusive minutes are assumed to be used up with the same calling pattern that is described in the basket, i.e. the same peak/off-peak ratio and the same distribution across destinations. Where the inclusive minutes are clearly limited to specific destinations or times of day this will be taken into account. No transfer of unused minutes is taken into account.

Any inclusive SMS-messages will be deducted from the basket before starting the calculation of the SMS message cost, up to the number of messages in the basket.

For each of the operators covered a set of packages shall be included so that the cheapest package offered by that operator can be calculated for each of the 3 baskets.

Multiple operators in each country shall be included, with at least the two operators with highest number of subscribers in each country. The operators included shall have a total market share of at least 50% based on subscriber numbers.

Basket results are calculated for a period of one year.

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