



Internet Access and Service Pricing (2)

**Relevant examples of pricing in some countries
different types of Internet services and future development**

Regional seminar on costs and tariffs
for the TAF group member countries
Yaounde, April 5-6, 2004

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ITU Expert**



Internet Access and Service Pricing (2)

In this session we will focus on DSL, why ?

- ▶ **Speed makes possible a number of new services**
 - But high speed best-effort Internet is a facility, it is not sufficient to generate long term revenues

- ▶ **Local loop unbundling**
 - a key for innovation and service development. Will also benefit to the incumbent operators if an appropriate tariff scheme is set-up

- ▶ **In developed markets today the service providers are competing by growing their network base**
 - investing in DSLAM and access network
 - investing in their national network to collect Internet dialed traffic and reach the incumbent operator's subscribers for telephony service

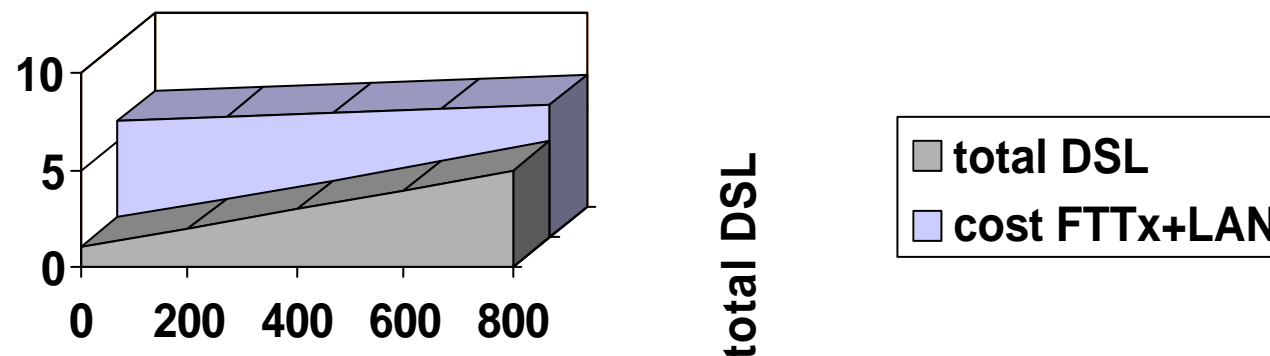
Acknowledgement : The presentation includes slides drawn by Alcatel for their presentations on DSL life cycle and derived from their major experience as leader in the DSL networking market.



Turn copper into gold

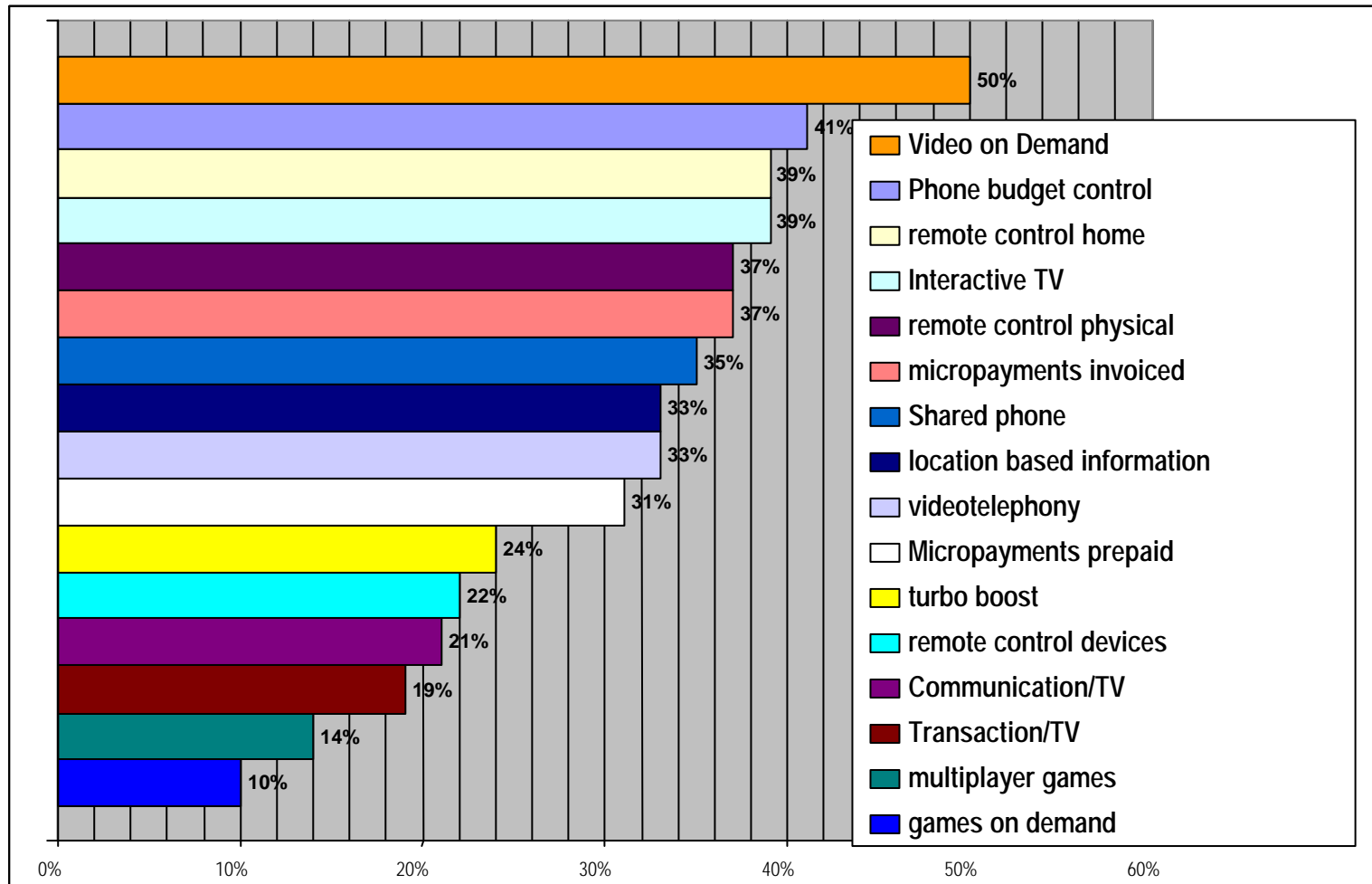
We believe that operators which achieve central office (CO) scale and excel in the provision of broadband product and service to the small and medium enterprise (SME) sector will turn copper into gold. (JP Morgan)

- ▶ **DSL technology is the only incremental broadband access technology (CAPEX)**
- ▶ **other technologies may become cheaper for very high penetration but require high upfront CAPEX investment**





Which services customers are expecting ? Alcatel primary research in Belgium





High speed Internet - broadband services

Voice over IP

- Primary line
- Second line
- IP Centrex usage
- Voice VPN

IP Centrex

- Basic
- Advanced

Multimedia Conferencing

- Distance learning
- Remote lab

Unified Messaging

Content Delivery

- Games
- Downloads (MP3)
- Gambling

Video on demand

- TV on demand
- Cinema of the future

Long Distance Bypass

- Internal
- External

IP offload

BB High Speed Internet

- PC to Phone

- Phone to PC

- IP VPN (data)

- BW on-demand

- QoS on demand

- Triple play

- Instant Messaging / Presence Management

- MMS on fixed network

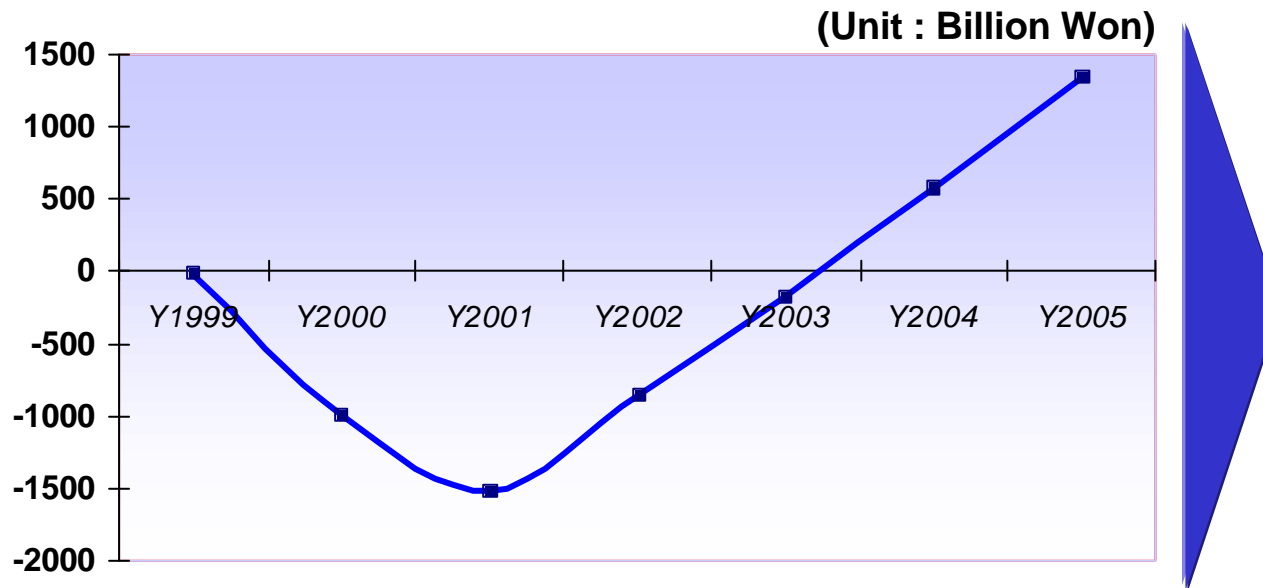
- 3G applications

All benefiting of high speed access or broadband but with different business model and different network requirements



Testimony of Korea Telecom : Cost and Revenue Analysis

▶ Cumulative cash flow



BEP end 2003

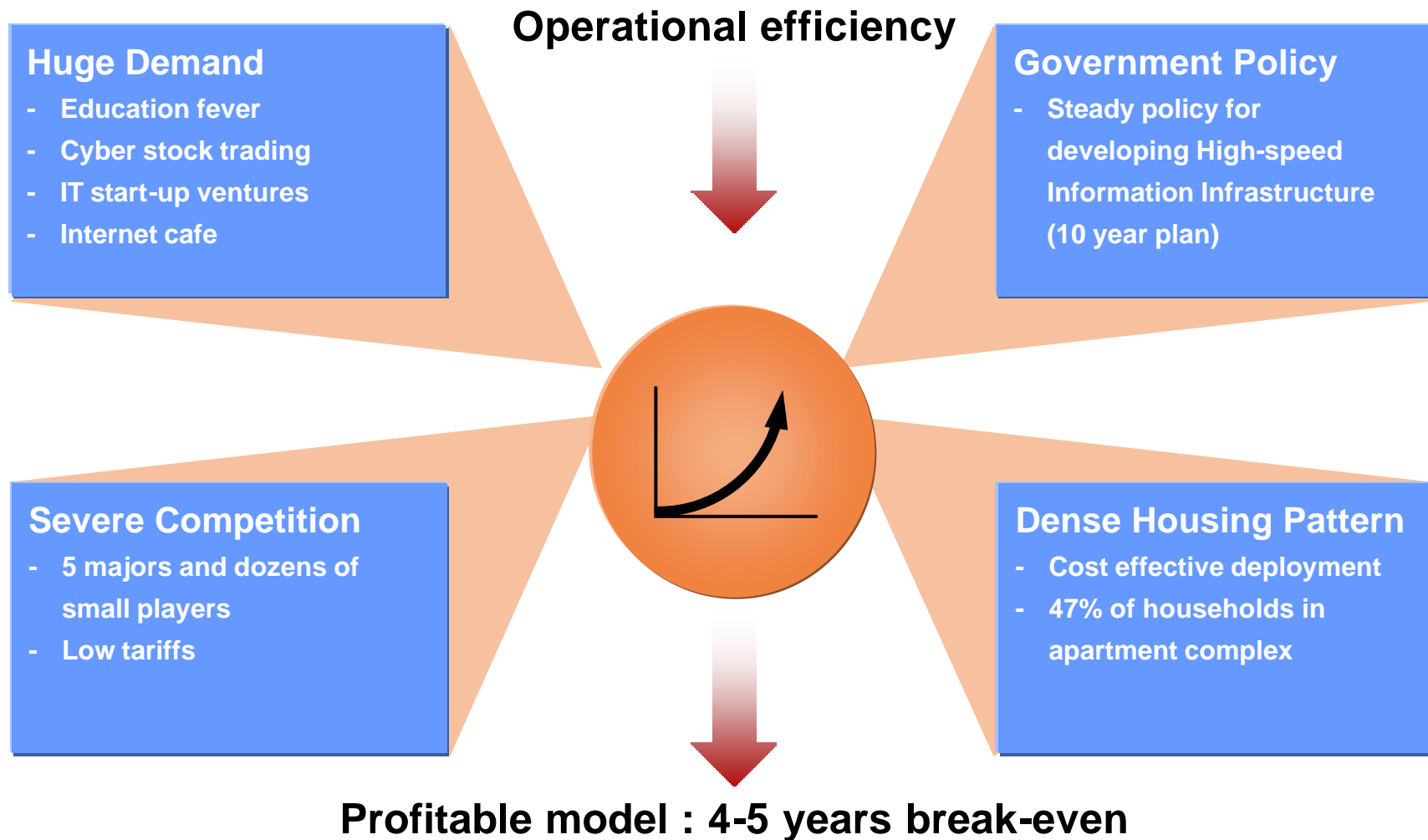
BEP : Break Even Point



Korea Telecom

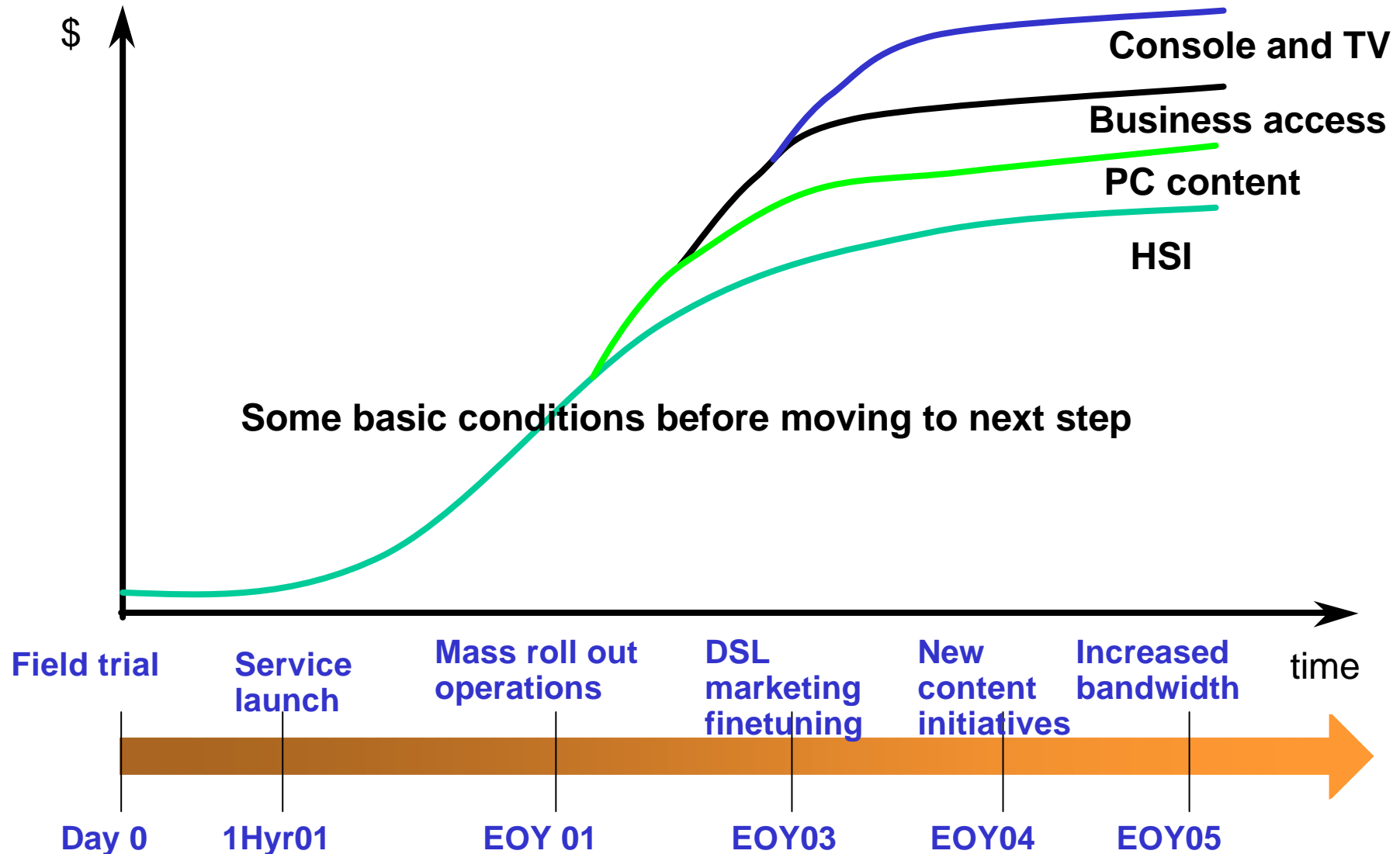


Korea Telecom - Key Success Factors





DSL lifecycle





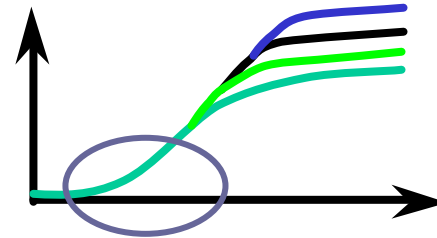
Initial mass market uptake

▶ Operations

- self install packages
- helpdesk
- provisioning
- front office

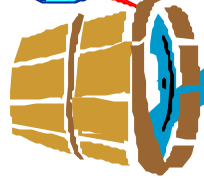
▶ Marketing

- setting right price level
- create awareness
- Point of Sale strategy (PoS)/distribution strategy





Operations Commercial and Operational Learning Curve

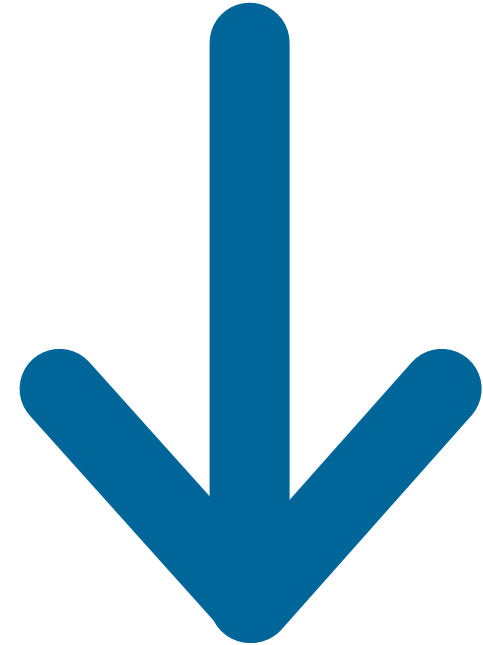


- 45% NO
COVERAGE

- 15% SALES
INEFFICIENCY

- 28 %
OPERATIONAL
ISSUES

100
prospects



12
customers



Operations: Self install

Plug and Play

► Package content

- USB Modem
- CD w/driver and manual
 - Driver with zero-configuration for optimal customer experience
 - CDs customized to service provider network
- Self-install guide
- Safety Instructions
- Filters

More than 75 % of subscribers succeed to install without help desk call or truck-roll





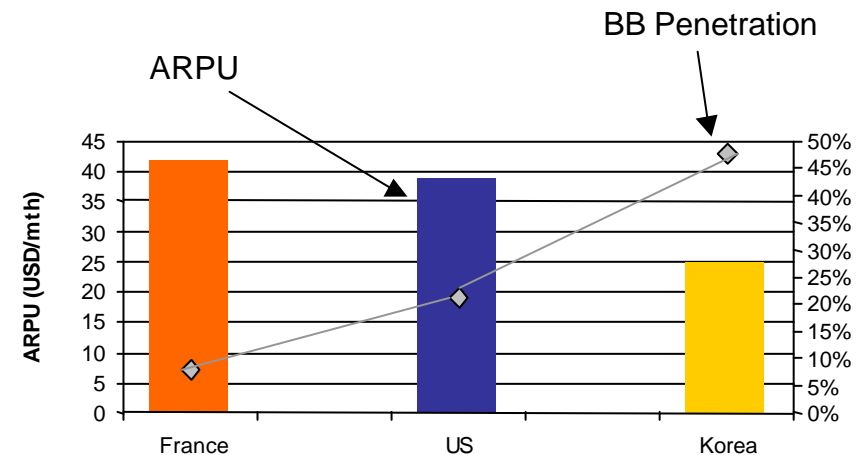
Benchmarks of Prices for Low-end Residential ADSL and Broadband Penetration

▶ Very different level of low-end ADSL prices in early days (Jan-01)

- Korea : USD 25 /month
- US : USD 39 /month
- France : USD 42 /month

▶ Broadband Penetration rate appears to be correlated to initial pricing level

- low ARPU drives BB penetration
- the BB access consumer is price sensitive
- even when there are multiple competitive access technologies, broadband penetration of each access technology is higher than in markets where there is no such competition (driven by low prices)

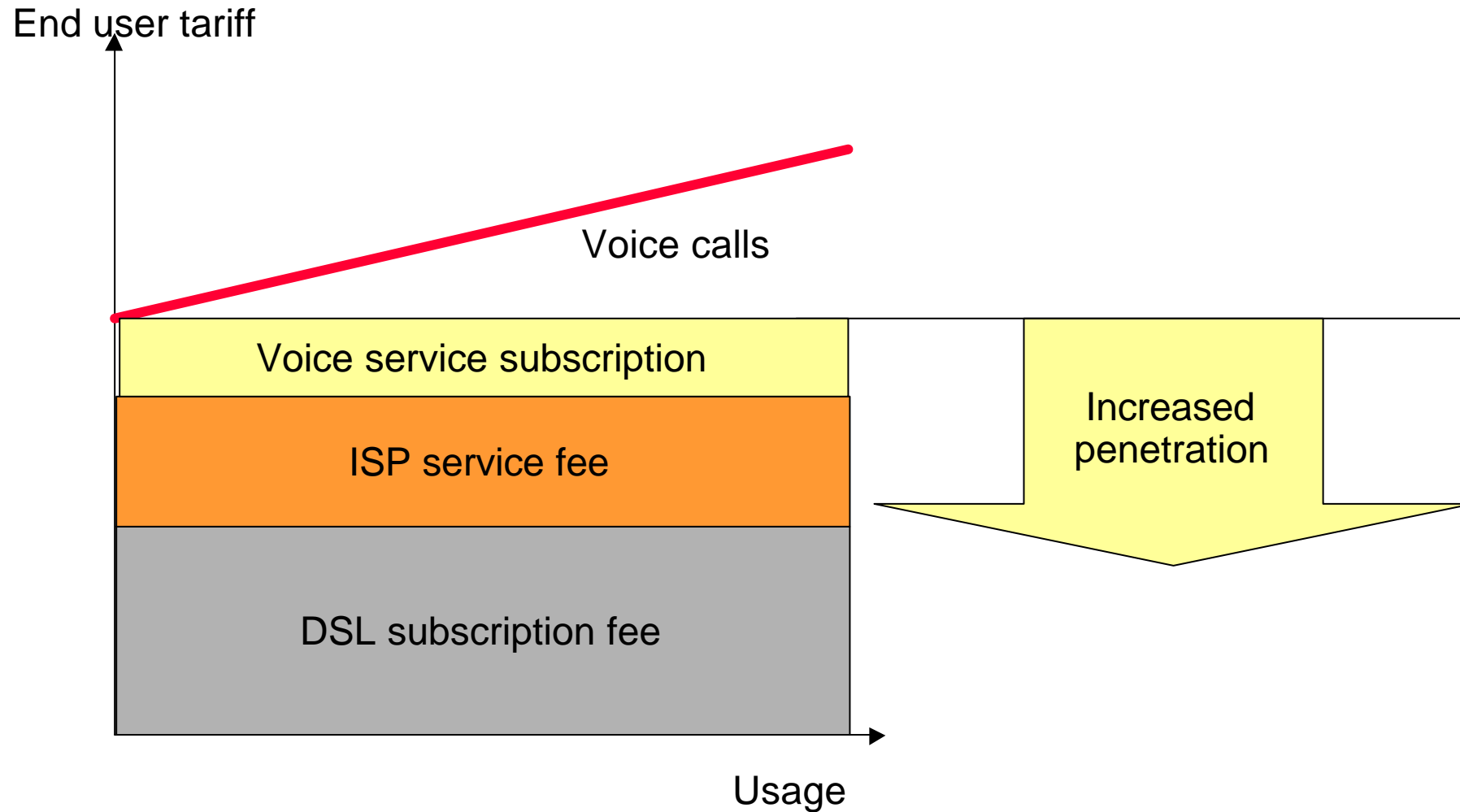


Correlation between ARPU & BB Penetration
AUGUST 2001

Source: France Telecom, Hanaro, Verizon, SBC



Traditional DSL mass market tariff model



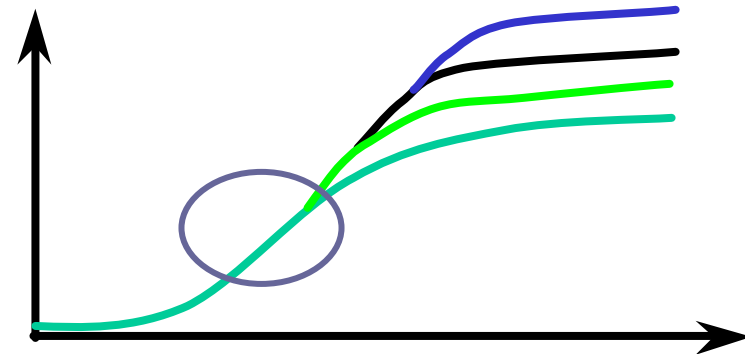


Mass market rollout linear growth

▶ Fine-tuning of DSL packages

- segmentation

▶ Promotional actions





DSL mass market revenue optimization: CAP monthly download capacity



► Belgacom case in 2002:

- Basic DSL mass market service: 50 Euro/month (including phone service and ISP service subscription)
- Download speed not capped but not committed
- Capacity per month capped to
 - 5 Gbytes download
 - 1 Gbytes uplink
- If limit reached
 - Offer to buy more capacity in 1 Gbyte download, 200 Mbytes uplink speed at 1 Euro/Gbyte. Triggered by E-mail when 80% of limit. Buying more capacity in intuitive mode
 - Downgrade to narrowband (64 kbps speed) for rest of month if upgrade not requested
 - Use of floating month window

**Significant revenue generator
since limit easily reached by teenagers**



Telekom Austria



▶ **AonSpeed with Time Credit**

- Unlimited surfing pleasure and 30 hours per month are included in the price.
- Extra
 - 1.3 eurocent per minute (slack hours)
 - 2.4 eurocent per minute (office hours)

▶ **AonSpeed with Data Credit**

- You can choose between 1 GB and 4 GB of data transfer volume and surf round the clock.
- Once exceeded, the account is closed for the remaining month



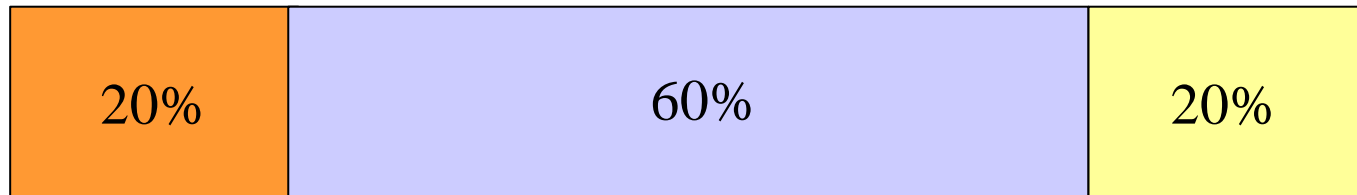
DSL mass market revenue optimization: Cap Bandwidth

- ▶ **50% of DSL lines in Europe can offer in excess of 3Mbps download speed**
- ▶ **Aggressively sell low cost base DSL package with very limited bandwidth (e.g. 128 kb).**
- ▶ **Bandwidth offered will**
 - Lead to frustration of end user in case of download of large files (games, films, download files)
 - Not provide performance for true on line gaming
- ▶ **Sell dynamic bandwidth upgrades paid on a per usage basis**
 - Explicitly requested in case of file download
 - Inherent in application when required for game of video quality
- ▶ **Accompanied with strong billing application to provide itemized bill for service offering**



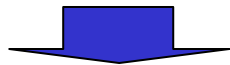
Operator (Market, Product, Cost and delivery) – Joint conclusions

Gold, silver, bronze strategy



bronze service

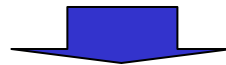
cheap ADSL entrance
product to attract low
bandwidth
(POTS/ISDN) and
cable customers
REDUCE OWN COSTS!



Only for BB entrance!

silver service

today's ADSL offer - but
change Download limit



Today's segment

gold service

Multimedia ADSL for
Gamers, gamblers
& Chatters



High revenue segment!



Pay as you go an extreme case: Fastweb Italy

- ▶ **Offer Telephone + DSL at slightly above price level of analogue subscriber line.**
 - The basic pack only supports a very limited download capacity
 - All communications whether voice or data will be paid on per minute basis
- ▶ **Accompanied with powerful bandwidth on demand tools with case per case payment.**
- ▶ **The result**
 - Dramatically increased DSL uptake (all phone subscribers with a PC)
 - Significant bandwidth on demand and usage revenues
 - The revenues from individual users will however show significant variations on a per month basis
- ▶ ***Telecom Italia now offering similar service in France (see later in the presentation)***



New revenue sources - Services and Bandwidth

▶ PC based residential services

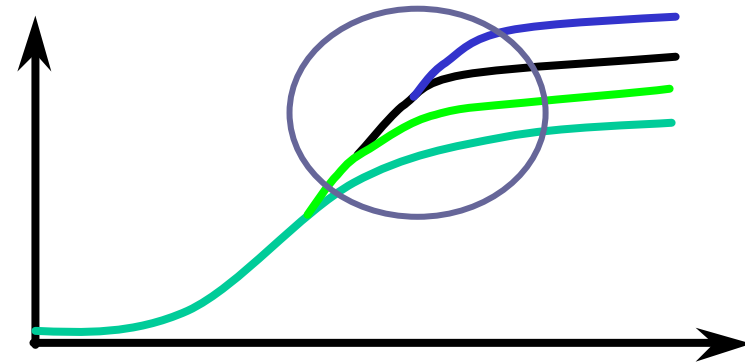
- micropayment billing services
- gaming
- gambling
- streaming

▶ Business Access

- teleworking
- value added SME services => security, connectivity, hosting,...

▶ Other platform based services

- gaming console
- TV and set top box





The real business is in incremental paid services even if you don't show it

free
La Liberté n'a pas de Prix

S'inscrire FreeBox Webmail Support Pagesperso Chat Webnews Jeux Recherche

Free haut débit | Forfait 50 heures | Accès gratuit |

Recherche sur le web avec google

Téléchargez MSN Messenger 6

[Sommaire](#) | [L'offre](#) | [S'inscrire](#) | [Téléphonie](#) | [Télévision](#) | [Dégroupage](#) | [Votre compte](#) | [Configuration](#) | [Support](#) | [Faq](#)

L'accès Haut débit illimité au prix du bas débit !

L'accès illimité haut débit 1024 kbit/s au prix du bas débit pour 29,99 euros TTC par mois

Free démocratise l'accès à Internet en proposant un forfait d'accès illimité haut débit à 29,99 euros TTC par mois sans frais d'accès. Cette offre est illimitée dans le temps, elle couvre l'ensemble de la France métropolitaine. Rejoignez sans attendre les milliers d'abonnés à Free haut débit.

- ♦ Frais d'accès au service : **gratuit**
- ♦ Le boîtier Freebox (USB & Ethernet) fourni **gratuitement**
- ♦ Sans durée d'engagement.
- ♦ Téléchargement illimité
- ♦ Débit **1024 kbit/s** en réception et **128 Kbit/s** en émission.
- ♦ En [zone dégroupée](#) vous bénéficiez d'un débit supérieur et de services additionnels (Téléphonie, télévision...)

- ♦ [Description de l'offre](#)
- ♦ [Questions & Réponses](#)
- ♦ [Votre ligne est-elle en zone dégroupée?](#)
- ♦ [Conditions générales de vente](#) [\[html\]](#) [\[pdf\]](#)

Free lance la téléphonie gratuite pour tous ! Nouveau

Tous les nouveaux abonnés de Free Haut-Débit vont maintenant recevoir le boîtier Freebox . Ils vont pouvoir bénéficier de l'accès à Internet à très haut débit et de la téléphonie gratuite en France métropolitaine [Lire le communiqué](#) | [La téléphonie](#) | [S'inscrire](#)

[Agrandir l'image](#)
[Descriptif du modem](#)

SAGEM F@st™ 908

[Agrandir l'image](#)
[Descriptif du modem](#)

[itif des modems](#)

Reference : <http://www.free.fr/>



The real business is in incremental paid services even if they don't show it

- ▶ **“Free” is investing heavily in Local Loop Unbundling to offer ADSL access at a competitive price and propose additional bundled services when unbundling is effective**
 - IP Telephony with black phone connection to “Free Box”
 - Television on DSL via the “Free Box”
- ▶ **At first glance advantage for the user is free of cost services**
 - the user might imagine that he will drop its telephone subscription
 - but you have to be a France Telecom subscriber to benefit of this tariff for ADSL
 - only national calls to “Free Box” users or France Telecom fixed telephone lines are included in the monthly fixed price
 - permanent availability of service and QoS not guaranteed, fax and modem calls not supported by the telephony service, need for main power on for the box.
 - “Free” objectives are to enter the access race, grow market share and grow business with incremental services



“Free” IP Telephony services : Tariffs



Les numéros de téléphone en 08 70 7X XX XX (Freebox) sont accessibles depuis l'étranger et depuis les mobiles.

Tarif Zone1 vers les téléphones fixes :

(Facturé à la seconde dès la première seconde)

Pays	Tarifs € TTC/ min.
Allemagne	0,03
Australie	0,03
Autriche	0,03
Belgique	0,03
Canaries (Iles)	0,03
Canada	0,03
Corée du Sud	0,03
Danemark	0,03
Espagne	0,03
États-Unis	0,03
Finlande	0,03
Hong Kong	0,03
Irlande	0,03
Israël	0,03
Italie	0,03
Japon	0,03
Luxembourg	0,03
Norvège	0,03
Nouvelle-Zélande	0,03
Pays-Bas	0,03
Portugal	0,03
Royaume-Uni	0,03
Singapour	0,03
Suède	0,03
Suisse	0,03
Vatican Cite	0,03

- ♦ [Description de l'offre](#)
- ♦ [Description des services](#)
- ♦ [Les tarifs](#)
- ♦ [Questions & réponses](#)
- ♦ [Choisir son numéro de téléphone](#)
- ♦ [Gestion des services](#)
- ♦ [Gestion de la messagerie vocale](#)
- ♦ [Inscription - Free Haut Débit](#)

- ♦ [Zone 1](#)
- ♦ [Zone 2](#)
- ♦ [Zone 3](#)
- ♦ [Zone 4](#)
- ♦ [Zone 5](#)
- ♦ [Zone 6](#)
- ♦ [Zone 7](#)
- ♦ [Zone France](#)
- ♦ [Vers numero court et speciaux](#)
- ♦ [Numéros Freebox](#)

- ♦ **Tarif Zone1**
vers les téléphones Mobiles
Vous devez ajouter au tarif vers les postes fixes de la destination appelée 0,19 € TTC par minute.



“Free” IP Telephony services : Tariffs

▶ **Zone 1 : €0.03 /minute (+ €0.19 / minute to mobile phones)**

Major industrialized countries : see list countries on previous page

▶ **Zone 2 : €0.08 /minute (+ €0.19 / minute to mobile phones)**

Acores	Chili	Islande	Pérou	Taiwan
Alaska	Chine	Liechtenstein	Pologne	
Andorre	Estonie	Monaco	Puerto Rico	
Argentine	Grèce	Madère	Rep Tchèque	
Autorité Palestinienne	Hongrie	Malaisie	San Marino	

▶ **Zone 3 : €0.19 /minute (+ €0.15 / minute to mobile phones)**

Afrique du Sud	Colombie	Guyane Franç.	Roumanie	Slovaquie
Albanie	Costa Rica	Indonésie	Russie	Slovénie
Algérie	Croatie	Islande	Pérou	Ukraine
Bahamas	Dominicaine Rep	Koweït	Pologne	Venezuela
Botswana	Georgie	Lesotho	Puerto Rico	Zambie
Brésil	Ghana	Liban	Reunion	Zimbabwe
Brunei	Gibraltar	Martinique	Rep Tchèque	
Bulgarie	Guadeloupe	Mexique	San Marino	
Chypre	Guam	Namibie	Serbie et Montenegro	



“Free” IP Telephony services : Tariffs

▶ Zone 4 : €0,29 /minute (+€0,10 / minute to mobile phones)

Angola	Bénin	Équateur	Malawi	Seychelles
Anguilla	Bhoutan	Féroé Iles	Malte	Swaziland
Antigua & Barbuda	Bolivie	Gambie	Maroc	Tadjikistan
Antilles Néerlandaises - Saint Martin	Bosnie-Herzégovine	Guatemala	Maurice Ile	Togo
Arabie Saoudite	Burkina Faso	Inde	Mauritanie	Trinité et Tobago
Arménie	Burundi	Iran	Mayotte	Tunisie
Aruba	Cameroun	Jamaïque	Moldavie	Turkménistan
Azerbaïdjan	Cayman Iles	Jordanie	Mongolie	Turquie
Bahreïn	Christmas Iles	Kazakhstan	Nicaragua	Uruguay
Bangladesh	Cocos Iles	Kenya	Ouganda	Vierge Iles (EU)
Barbade	Congo	Kirghizistan	Panama	
Belarus - Biélorussie	Congo (Rep Dém)	Laos	Papouasie Nlle Guinée	
Belize	Cote d'Ivoire	Liberia	Paraguay	
	Dominique	Libye	Polynésie Française	
	Égypte	Lituanie	Rep Centrafricaine	
	El Salvador	Macao	Rwanda	
	Emirates Arabes	Macédoine	Sénégal	

▶ Zone 5 : €0,49 /minute (fixed & mobile phones)

Afghanistan	Groenland	Mariannes Iles	Ouzbékistan	St Pierre/Miquelon
Antarctique	Guinée Rep	Micronésie	Pakistan	St Vincent
Cambodge	Guinée-équatoriale	Montserrat	Palau	Suriname
Cape Verde	Guyana	Mozambique	Philippines	Syrie
Comores Iles	Guyane	Myanmar	Qatar	Tanzanie
Corée du Nord	Haïti	Népal	Samoa (Américain)	Tchad
Djibouti	Honduras	Niger	Samoa Occidental	Thaïlande
Érythrée	Iraq	Nigeria	Sierra Leone	Tonga
Éthiopie	Latvia - Lettonie	Norfolk Islands	Soudan	Turks et Caicos Iles
Fidji	Madagascar	North. Mariana Islands	Sri Lanka	Vietnam
Gabon	Maldives	Nouvelle-Calédonie	St Kitts & Nevis	Wallis & Futuna
Grenade	Mali	Oman	St Lucie	Yemen



“Free” Telephony services : Tariffs

▶ Zone 6 : €0,99 /minute (fixed & mobile phones)

Ascension	Falkland - Malouines	Marshall (Iles)	Sao Tome et Principe	Tuvalu
Cook (Iles)	Guantanamo (cuba)	Nauru	Somalie	Vanuatu
Cuba	Guinée-Bissau	Niue (Ile)	St Hélène	
East Timor	Kiribati	Salomon (Iles)	Tokelau	

▶ Zone 7 : €0,49 /minute (fixed & mobile phones)

Diego-Garcia	International Networks	882 Inmarsat
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▶ Other Services and limitations

- Special fees for special services (not free)
- No access to kiosks services of France Telecom (shared revenue services)
 - Numbers : 0836PQ - 0840PQ - 0841PQ - 0842PQ - 085BPQ - 0860PQ - 0868PQ - 0878PQ - 0890PQ - 0891PQ - 0892PQ - 0893PQ - 0897PQ - 0898PQ - 0899PQ - 32PQ (sauf le 3244) - 36PQ are not accessible
- Call from France national lines charged like a local call
- Choice of telephone number in France non geographic format : 08 70 7x xx xx - Number portability not possible
- One call at a time



A basic set of channels bundled in monthly fee + optional paid Channels

free
La Liberté n'a pas de Prix

[S'inscrire](#) [FreeBox](#) [Webmail](#) [Support](#) [Pagesperso](#) [Chat](#) [Webnews](#) [Jeux](#) [Recherche](#)

[Free haut débit](#) | [Forfait 50 heures](#) | [Accès gratuit](#) |

Recherche sur le web avec google
 [envoyer](#)

Le Bescherelle pratique
-5% **18,05 €** [CLIQUEZ ICI !](#)

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La télévision avec Freebox [Envoyer par mail](#) [Imprimer](#)



Freebox - La télévision numérique

Free innove en offrant la télévision numérique via la prise de téléphone sur la France entière.

[Consultez l'offre](#)

L'offre comprend plus de 100 chaînes et services ainsi que des chaînes à option (vendues soit par bouquet soit à l'unité sans durée d'engagement) [Consulter la liste par thématique](#)

Canal		Canal		Canal		Canal	
2		27		57		92	
3		30		60		93	
5		31		61		94	
6		34		66		95	



Alice : Telecom Italia in France a combined offer of ADSL and telephone

Alice

ACCÈS CLIENT

Adresse e-mail

Mot de passe OK▶

PARTICULIERS **PROFESSIONNELS** **TELECOM ITALIA FRANCE**

● ADSL et Téléphone ● ADSL ● Téléphone ● Guide utilisateur

DECouvrez LES OFFRES
Alice ADSL et Téléphone

**"Super" ou "Super Libre" ?
A vous de choisir !**

Vous décidez si vous voulez un accès haut débit facturé à la minute ou illimité avec votre abonnement téléphonique Alice inclus.

Alice Super	Un accès Internet ADSL illimité et votre abonnement téléphonique inclus.	EN SAVOIR PLUS
Alice Super Libre	Ne payez que ce que vous consommez au téléphone, comme sur Internet.	EN SAVOIR PLUS
Alice Super Libre avec Téléphone Instant Libre	Sans contrainte, une facturation ADSL à la minute et un coût fixe par appel partout en France Métropolitaine.	EN SAVOIR PLUS
Alice Super 512-1024 avec Téléphone Instant Libre	Le tout illimité pour une connexion ADSL 1024 et un coût fixe par appel partout en France Métropolitaine.	EN SAVOIR PLUS
Alice Super 1024-2048	Le super illimité libre pour une connexion ADSL 2048 et le téléphone illimité.	EN SAVOIR PLUS

[Aide](#) | [Contact](#) | [Conditions contractuelles](#)



Alice : Telecom Italia in France

▶ Alice ADSL offer in unbundling areas

- ADSL 128/64
 - A unique usage-based offer :€0.025 per minute + €50 set-up fee
- ADSL 512/128
 - Monthly fee : € 10.95
 - speed limited to 128/64 until physical unbundling is effective

▶ Alice ADSL + full Telephone service in unbundling areas

- ADSL 1024/128
 - Monthly fee : €24.95 for ADSL + “Alice Telephone libre” service
 - speed limited to 512/128 until physical unbundling is effective
- ADSL 2048/256
 - Monthly fee : €46.95 for ADSL + Alice Telephone illimité” service
 - speed limited to 1024/128 until physical unbundling is effective



Adresse e-mail

Mot de passe

OK >

PARTICULIERS

PROFESSIONNELS

TELECOM ITALIA
FRANCE

DECouvrez LES OFFRES

Alice ADSL et Téléphone

Alice Super 1024-2048

Tous les avantages de Telecom Italia avec Alice Super : Abonnement téléphonique principal + Communications fixes en France illimitées + Accès très haut débit illimité

46,95 EUROS / mois¹

LA QUALITE ALICE DU HAUT DEBIT

Dès maintenant : un débit de **1024 Kbps** en réception et **128 Kbps** en émission.

Au moment du dégroupage votre débit passe gratuitement à **2048 Kbps** en réception et à **256 Kbps** en émission sans frais supplémentaires.

LE CONTRAT D'ALICE

- SANS ENGAGEMENT DE DUREE
- Sans frais de mis en service
- Sans frais de résiliation
- Vous ne paierez plus qu'un seul abonnement**
- Disponibilité permanente de votre ligne pour téléphoner
- Sans changement de numéro de téléphone

PRÊT POUR ALICE?

[Cliquez ici](#). Les dates prévisionnelles de déploiement de l'Offre Alice en mode dégroupage pour votre ligne téléphonique!

PRÊT POUR ALICE?

[Cliquez ici](#). Les dates prévisionnelles de déploiement de l'Offre Alice en mode dégroupage pour votre ligne téléphonique!

L'INSTALLATION OPTIONNELLE DE VOTRE ACCES HAUT DEBIT

- Location du modem avec kit ADSL (CD + 2 filtres + guide d'installation) 1,99 euros par mois.
- Installation et configuration à domicile par un technicien Alcatel au prix de 96 euros

VOTRE ABONNEMENT TELEPHONIQUE Alice Téléphone Illimité INCLUS

LOCAL	NATIONAL	MOBILES		INTERNATIONAL
24h/24 7J/7	24h/24 7J/7	heures creuses ₁	heures pleines ₂	24h/24 7J/7
Zéro centimes	Zéro centimes	15 centimes € par minute*	30 centimes € par minute*	Liste des tarifs par pays*

¹ Du lundi au vendredi de 21 h 30 à 8 h 00
Samedi de 0 h 00 à 8 h 00 et de 12 h 00 à 0 h 00
Dimanche et jours fériés

² Du lundi au vendredi de 8 h 00 à 21 h 30,
Samedi de 8 h 00 à 12 h 00

* Frais de connexion 12cts € par appel

Les appels vers les mobiles internationaux sont surtaxés de 28 centimes € /mn. Les appels vers les téléphones satellitaires sont tarifés comme appels vers mobiles dans la Zone 7.

LES SERVICES GRATUITS

- Une assistance technique téléphonique totalement gratuite au numéro 0 800 00 10 33
- Une boîte e-mails de 100 Mo (jusqu'à 10 Mo par message)
- Des logiciels antivirus et antispam
- Facture détaillée

Tous nos tarifs sont exprimés en TTC et sont valables à partir du 1^{er} février 2004.

¹ avec Telecom Italia comme opérateur pour l'abonnement principal de 13€ttc/mois dès le dégroupage total de votre ligne. Appelez le 10 33 pour les conditions de l'offre Alice « ADSL + Téléphone »

INSCRIVEZ-VOUS

Découvrez toutes les offres Alice Super + Téléphone



Alice : Telecom Italia in France a combined offer of ADSL and telephone

- ▶ Alice basic telephone service (€13 monthly fee, same as FT)

VOTRE ABONNEMENT TELEPHONIQUE Alice Téléphone Libre INCLUS

LOCAL	NATIONAL	MOBILES		INTERNATIONAL
24h/24 7J/7	24h/24 7J/7	heures creuses ₁	heures pleines ₂	24h/24 7J/7
1,0 centimes € par minute*	3,1 centimes € par minute*	15 centimes € par minute*	30 centimes € par minute*	Liste des tarifs par pays*

- ▶ Alice unlimited telephone service (bundled with ADSL 2048 (€46.95 monthly fee))

VOTRE ABONNEMENT TELEPHONIQUE Alice Téléphone Illimité INCLUS

LOCAL	NATIONAL	MOBILES		INTERNATIONAL
24h/24 7J/7	24h/24 7J/7	heures creuses ₁	heures pleines ₂	24h/24 7J/7
Zéro centimes	Zéro centimes	15 centimes € par minute*	30 centimes € par minute*	Liste des tarifs par pays*



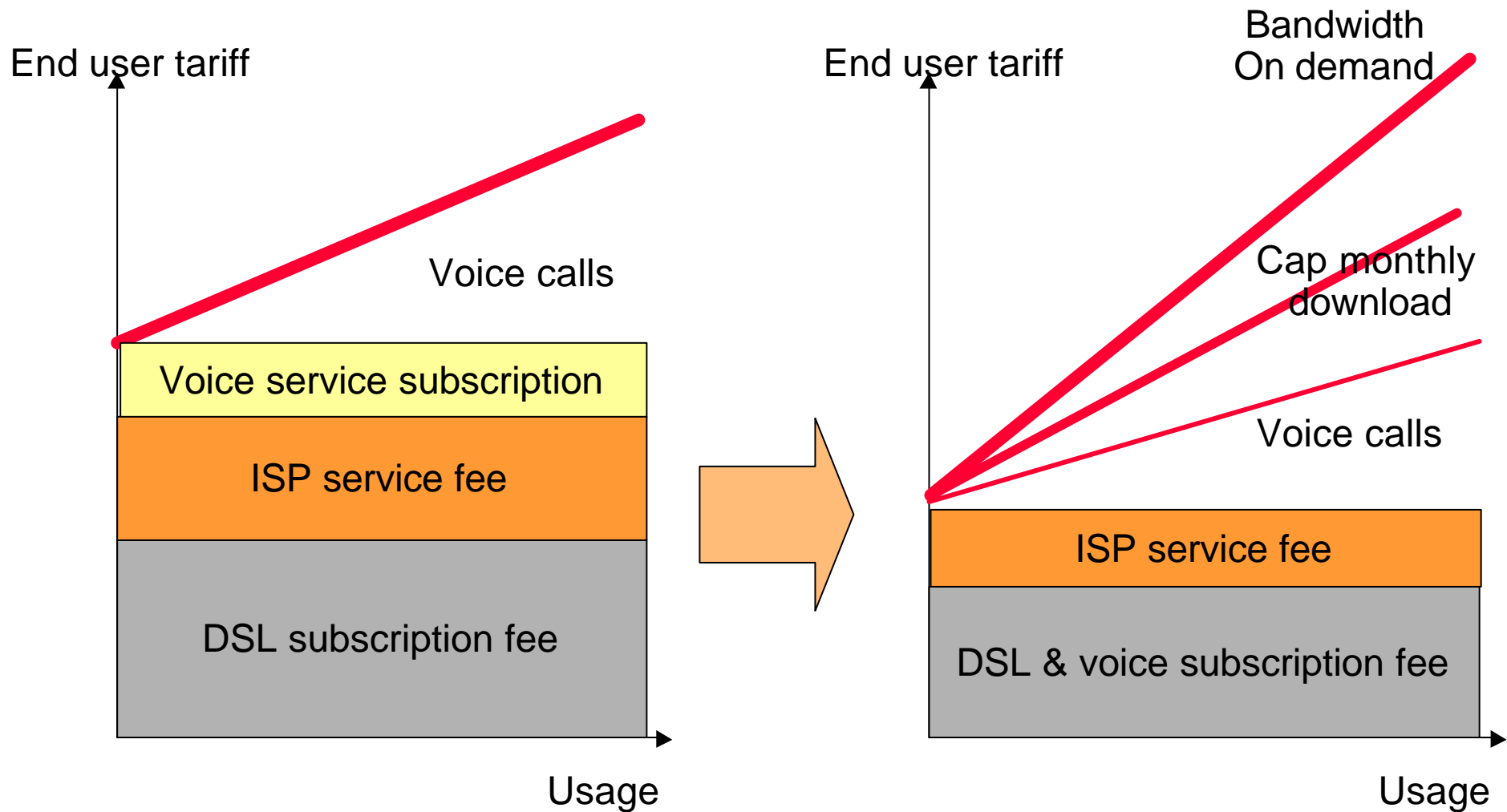
Alice : Telecom Italia in France a combined offer of ADSL and telephone

- ▶ Example of international calls tariffs and comparison with VoIP telephony service offered by “Free”

COUNTRIES (EXAMPLES)	TARIFFS / MINUTE ALICE (Telecom Italia in France)	TARIFFS / MINUTE ("Free" IP Telephony)
Afghanistan	0.99	0.49
Afrique du Sud	0.55	0.19
Albanie	0.29	0.19
Algérie	0.29	0.19
Allemagne	0.08	0.03
Angola	0.69	0.29
Anguilla	1.40	0.29
Antigua	1.40	0.29
Antilles Hollandaises	0.99	0.29
Arabie Saoudie	0.69	0.29
Argentine	0.55	0.08
Australie	0.29	0.03
Autriche	0.08	0.03
Benin	0.55	0.29
Burkina Faso	0.69	0.29
Cameroun	0.69	0.29
Côte d'Ivoire	0.55	0.29
Gabon	0.55	0.49
Gambie	0.69	0.29
Ghana	0.55	0.19
Guinée	0.99	0.49
Guinée Bissau	1.40	0.99
Japon	0.35	0.03
Kenya	0.69	0.29
Rep. Centrafricaine	1.40	0.29
Senegal	0.55	0.29
USA	0.08	0.03



To a more aggressive DSL revenue model





Gaming market

▶ Most revenues from PC based games

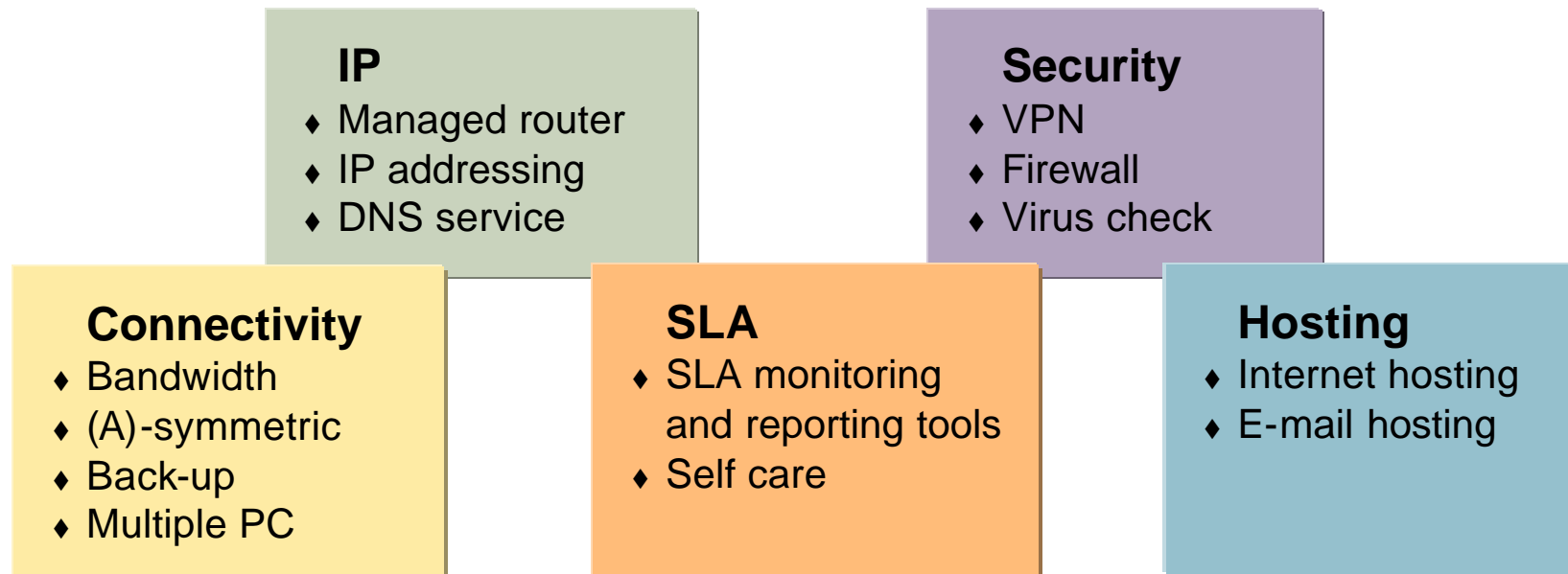
▶ basically 3 models:

- Sony model (eg. Everquest, users pays 10\$ to Sony)
- telco revenue sharing model (users pays telco, telco pays gaming developer eg. Lineage)
- distributor model (telco is direct distributor of gaming software, eg. Dark ages of Camelot)



Business Access Components

- ▶ **Successful product offering is composed of different elements**





Video Services

BTV & Electronic Program Guide (EPG)



- ▶ Broadcast programming equivalent to cable or satellite offerings
 - **News, sports, politics, economy, weather, etc.**
- ▶ EPG provides programming overview with 7-14 day preview
- ▶ On demand information for TV content

Enhanced / Interactive TV



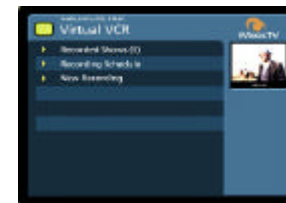
- ▶ Selection of different camera angles
- ▶ Replay of sequences and scenes
- ▶ Highlights on request
- ▶ Interactive and customized advertising

Near VoD & Pay-Per-View



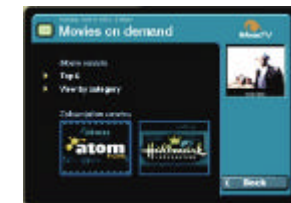
- ▶ Pay Per View content accessed immediately with Parental control
- ▶ Typically implemented as another broadcast channel
- ▶ Event-driven buying

Personal Video Recorder (PVR)



- ▶ Record and play broadcast content without video cassette
- ▶ Stop, pause, rewind, fast forward previously recorded content

Video on Demand



- ▶ Selection, download or streaming and individual billing of movies
- ▶ Download VoD or real time streaming
- ▶ VCR-like functionality



Bandwidth on demand - another way to generate incremental revenues

- ▶ **Provide boost button on download pages with notification that charging will be done on a per case basis**
- ▶ **When end user hits button, bandwidth is instantly upgraded to provide fast download**
- ▶ **Collection of basic billing record including (duration of download, number of megabytes etc...) to allow operator to make itemized bill**
- ▶ **Revenue collected by access provider**
- ▶ **Increase traction of preferred ISPs by offering higher speed download from their web site (boost button).**



Bandwidth on demand - another way to generate incremental revenues

- ▶ **For file downloads, this service will be manually triggered**
- ▶ **For some applications, the higher bit rate is unavoidable. In this case, the bandwidth upgrade will be invoked automatically by the application.**
- ▶ **Again, the application will collect all the information to enable itemized billing**



More aggressive DSL mass market revenue models

- ▶ **Keep the basic service tariff to a minimum to guarantee maximum service penetration**
- ▶ **Built-in restrictions in base service level which can be easily lifted using intuitive tools and charge per usage for these service upgrades**
 - Limit free on line time with per minute charging for extra time
 - CAP total monthly download
 - Bandwidth on demand
- ▶ **Move larger usage customers up to a higher service level with more flexibility**

NOUVEAU : 150 F la minute d'appel à partir de 23H00

avec un tarif de nuit aussi bas,
une sieste s'impose...

NELSON - LEO BURNETT Affiliated

the future's bright, the future's Orange

orange™

NOUVEAU : 150 F la minute d'appel à partir de 23H00

Merci de votre attention
Après un tel travail sur les tarifs,
une sieste s'impose...

NELSON - LEO BURNETT Affiliated

the future's bright, the future's Orange

orange™



Back-up

- ▶ **Back-up slides on VoIP business experiences**



From a Free Model To A Revenue Generating Model

► A lot of experiments promising free calls

<http://www.geocities.co.jp/CollegeLife-Cafe/9907/network/en/pc2ph.htm>

[VocalCommerce](offer free unlimited PC to phone calls. No software to download, runs from a java applet. Free calls to Australia Austria Canada Denmark Finland France Germany Ireland Israel Japan Malaysia Netherlands New Zealand Norway Puerto Rico Russia, Moscow Singapore South Korea Spain Switzerland Taiwan United Kingdom United States U.S. Virgin Islands)]
[TataTEL](offer free PC to phone calls. Free calls to over 240 countries .)In order to make a free long distance call you must display a banner to earn phone time.] Japanese Only
[RiRiRi Phone](offer free unlimited PC to phone calls. No software to download, runs from a java applet. Free calls to Australia Austria Canada Denmark Finland France Germany Ireland Israel Japan Malaysia Netherlands New Zealand Norway Puerto Rico Russia, Moscow Singapore South Korea Spain Switzerland Taiwan United Kingdom United States U.S. Virgin Islands)]
[Make your computer your phone! www.iConnectHere.com](Unlimited calls to US and Canada from any phone anytime from your PC.)]
[Click Go2call to call the World for Free! to call free to the USA, Canada, UK, France, Germany, Italy, Japan, Korea, Malaysia, Netherlands, New Zealand, Norway, Singapore, Spain, Switzerland, Taiwan, Thailand, United Kingdom, USA, and Vietnam]
[Phone Free]is offering free PC to phone to anywhere in the US
[MediaRing]FREE PC-to-Phone calls to the United States for a small fee. At media ring you can send voice mail, text messages, and more. Split your personality.
[Dialpad Communications, Inc.](free unlimited web to phone calls. No software to download or install, run from a java-applet. Great for US)]
[HotTelephone](offer free unlimited PC to phone calls. No software to download, runs from a java applet. Free calls to Australia Austria Canada Denmark Finland France Germany Ireland Israel Japan Malaysia Netherlands New Zealand Norway Puerto Rico Russia, Moscow Singapore South Korea Spain Switzerland Taiwan United Kingdom United States U.S. Virgin Islands) to view the list
[Pagoo](free unlimited web to phone long distance and local calls. No software to download, runs from a java applet. Free calls to Australia Austria Canada Denmark Finland France Germany Ireland Israel Japan Malaysia Netherlands New Zealand Norway Puerto Rico Russia, Moscow Singapore South Korea Spain Switzerland Taiwan United Kingdom United States U.S. Virgin Islands)]
[Microsoft messenger service](call PC to PC, or PC to phone, or phone to phone. No software to download, runs from a java applet. Free calls to Australia Austria Canada Denmark Finland France Germany Ireland Israel Japan Malaysia Netherlands New Zealand Norway Puerto Rico Russia, Moscow Singapore South Korea Spain Switzerland Taiwan United Kingdom United States U.S. Virgin Islands)]
[Callrewards.com](offer FREE unlimited PC to phone call service. No software to download, runs from a java applet. Free calls to Australia Austria Canada Denmark Finland France Germany Ireland Israel Japan Malaysia Netherlands New Zealand Norway Puerto Rico Russia, Moscow Singapore South Korea Spain Switzerland Taiwan United Kingdom United States U.S. Virgin Islands)]

Actually these offers are:

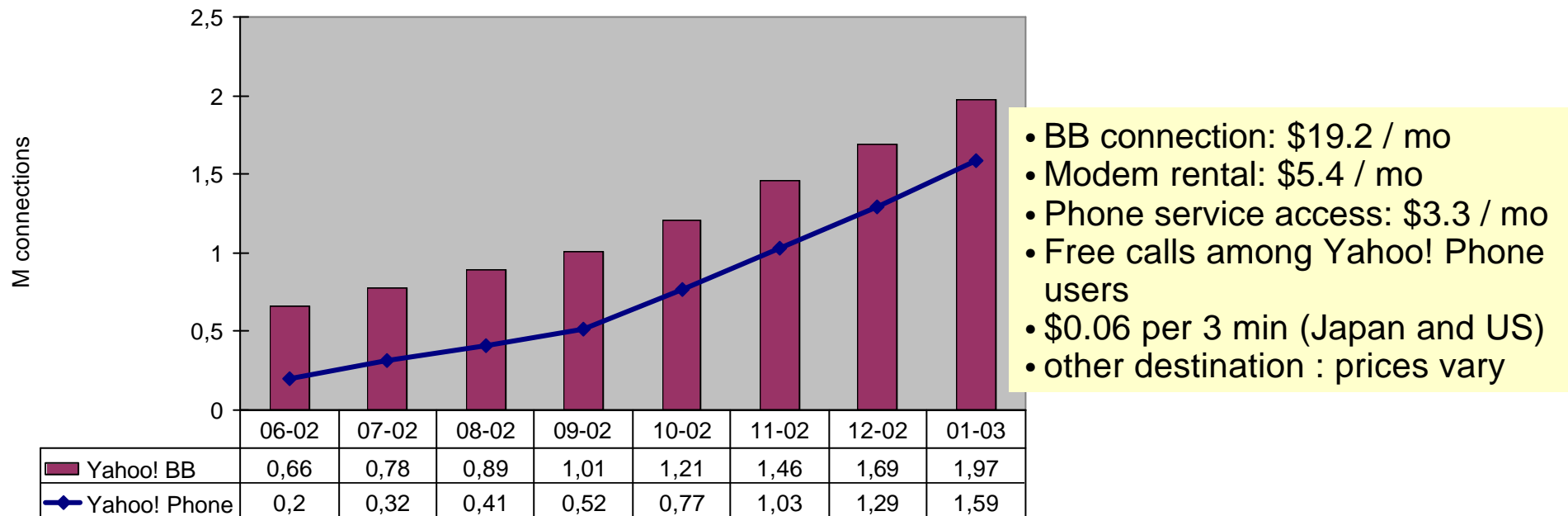
PC to PC or with large subscription fee
or associated to a specific burden (ads)
or very limited geographically
or very limited in time
**in all cases benefiting of the
free of cost local calls in the US**

A number of them are dead today
Making money with free of cost services was born
with the Internet bubble and blew up with the same



VoIP success story Yahoo! Phone (Japan)

It costs Yahoo! Y37,000 (€270) to acquire each new BB customer



Sources: Softbank Corp. and Probe Research, Inc

June 2002: 30% of Yahoo! BB users subscribed to Yahoo! Phone.
65% of new BB subscribers
January 2003: **80% of Yahoo! BB users subscribed to Yahoo! Phone**



Yahoo! BB - Softbank: A market success. A financial hazard ?

Softbank Posts Deep Loss Amid Broadband Buildout

By PHRED DVORAK Staff Reporter of THE WALL STREET JOURNAL

TOKYO -- Softbank Corp., best known as a key investor in companies like Yahoo Inc., said it lost ¥34.7 billion (\$289 million) during the April-June quarter, as it continued to pour money into a risky high-speed Internet-access business.

Softbank was reporting quarterly earnings for the first time, and didn't provide prior-year comparisons. But Softbank's loss for the three months ended June 30 was around 60% of the group net loss of ¥55.8 billion the company posted in the six months to September 2002. Softbank also said it had an operating loss of ¥24.1 billion on revenue of ¥103.8 billion in the latest quarter.

The red ink comes as Softbank battles to expand an ambitious Japanese broadband service called Yahoo BB -- in the teeth of fierce competition for telephone and Internet-access services by former phone monopoly Nippon Telegraph & Telephone Corp. **Yahoo BB is fighting to win customers through aggressive street-side sales campaigns and cutthroat pricing.**

To finance its attack, Softbank is draining a substantial war chest of investment gains it accrued from shrewd, early bets on companies such as Yahoo. Softbank now owns 4% of Yahoo, down from a peak of about 37% in 1996. Softbank still owns 41.94% of Yahoo Japan. In the April-June quarter Softbank netted ¥9 billion from sales of stock in U.S. Internet-equipment maker UTStarcom Inc.

During the April-June quarter, the most profitable piece of Softbank's business was its interest in Yahoo Japan, while the largest bit of revenue -- ¥56 billion -- came from Internet commerce operations. Softbank's broadband business saw a group operating loss of ¥28.9 billion.

But Softbank president Masayoshi Son said the broadband business is on track to profitability. The number of Yahoo BB users approached three million at the end of July, and Mr. Son said that the business would now be breaking even, if marketing and promotion costs to lure customers -- a major expense -- are excluded. Mr. Son said those costs totaled about ¥8 billion during the month of July.



Yahoo! Phone a market success in Japan But in the meantime in South Korea...

▶ Thrunet e-call

- Huge take rate of BB (1.5 M Thrunet BB subscribers)*
- VoIP on BB launched early (Thrunet's e-call service)
- **Not a significant take rate** according to RHK (*figures not released*)
 - e-phone purchase: \$125
 - e-call subscription: \$2.5
 - Domestic calls \$0.03 per 3 min (as normal local calls)
 - Calls among e-call users are free
 - Calls to US \$0.09 compared to \$0.61 through KT

▶ Same limited success for Hanaro

- Identical pricing scheme
- After 4 month, 1,543 VoIP subscribers (compared with 655 k subscribing to BB+PSTN bundle with the same operator)

NB: Thrunet filed for bankruptcy in March '03; Hanaro currently in cash difficulty should survive



Other implementations of mass market VoIP (1)

▶ France

- **Free Telecom** provides the service in areas where local loop unbundling is in place
 - Black phone connection through "Freebox"
 - No charge above BB subscription (€30 / month)
 - choice of your phone number in the range of 08 70 7x xx xx (no portability)
 - Free calls among peers and FT lines inside France; 3c/min to major Int'l destinations
 - NOT a substitute to France Telecom line (FT subscription still needed for access to copper; no guaranteed QoS)

▶ Netherland

- **PILMO** offers the service as PC-to- service, possibly connecting to a blackphone (InternetPhoneWizard reserved to NL users)
 - Setup: €99; Subscription: €8.45/mo
 - Call charge: NL 1c to 2.8c/min; 4c/min to major Int'l destinations (US, Europe, China, Australia)



Other implementations of mass market VoIP (2)

▶ US

- **Vonage** 1st phone line services with 10 000 BB subscribers acquired 2002, and about 35 k mid 2003
- Monthly voice fee at US \$ 39.99 + taxes on top of BB fee & modem
- Unlimited call plan to North America
- No by-default emergency (*) & directory services, no Calling Name presentation
- Traditional black phones connected to PC with a VoIP adaptor

▶ Also:

- Net2phone, iConnectHere, Packet8



About VoIP

▶ A Mass-market VoIP as a substitute to PSTN ?

- Emerging market
- Mainly offered by Competitive Service Providers, taking profit of the huge margins inherited from monopoly
- Economic model not stabilized
 - Cannibalization of existing main revenue source
- Regulatory situation not fully settled
 - VoIP used as trojan horse to induce deregulation of voice business
- Technical constraints for offering QoS and service continuity will generate under way of being solved at network level
- Currently no significant volume compared to PSTN
- BUT strong potential to represent a threat to incumbent operators in the medium term