



orange™

UMA & Femtocells: Complementary Technologies



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UMA
TODAY



UMA & Femtocells: Complementary Technologies



Agenda

- UMA Market Update
- Orange Unik Overview
- Orange Femtocell Evaluation

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UMA Market Update

Steve Shaw

November 20, 2008

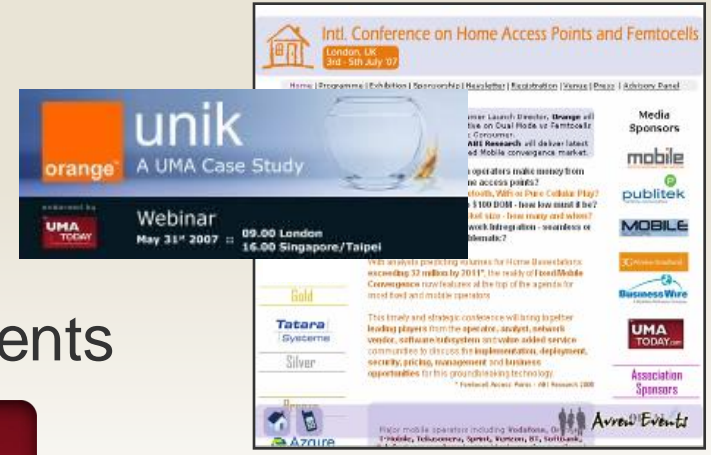
UMA Today Industry Focus

Education and promotion



www.UMAToday.com

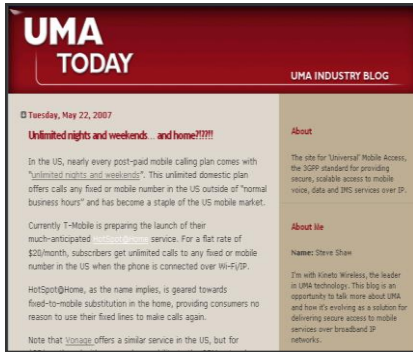
Web Site Events



Blog

Awards

Media



UMAToday.blogspot.com



Mobile operators set their sites on your home...and the battle for the building flares up

Mobile Operator Value Proposition

Make the mobile phone work better, cost less



**Increase Voice
MOU/ARPU**

**Low Cost Indoor
Mobile Voice**

**High-Quality
Indoor Coverage**



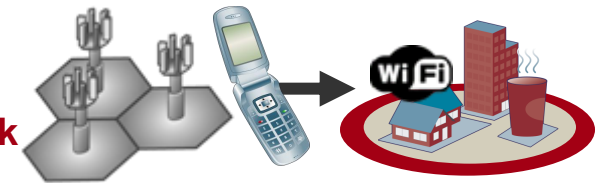
**Lower
Subscriber Churn**



**Increase Data/
IMS Service Use**

**Low Cost Indoor
Mobile Data**

**Macro Network
Offload**

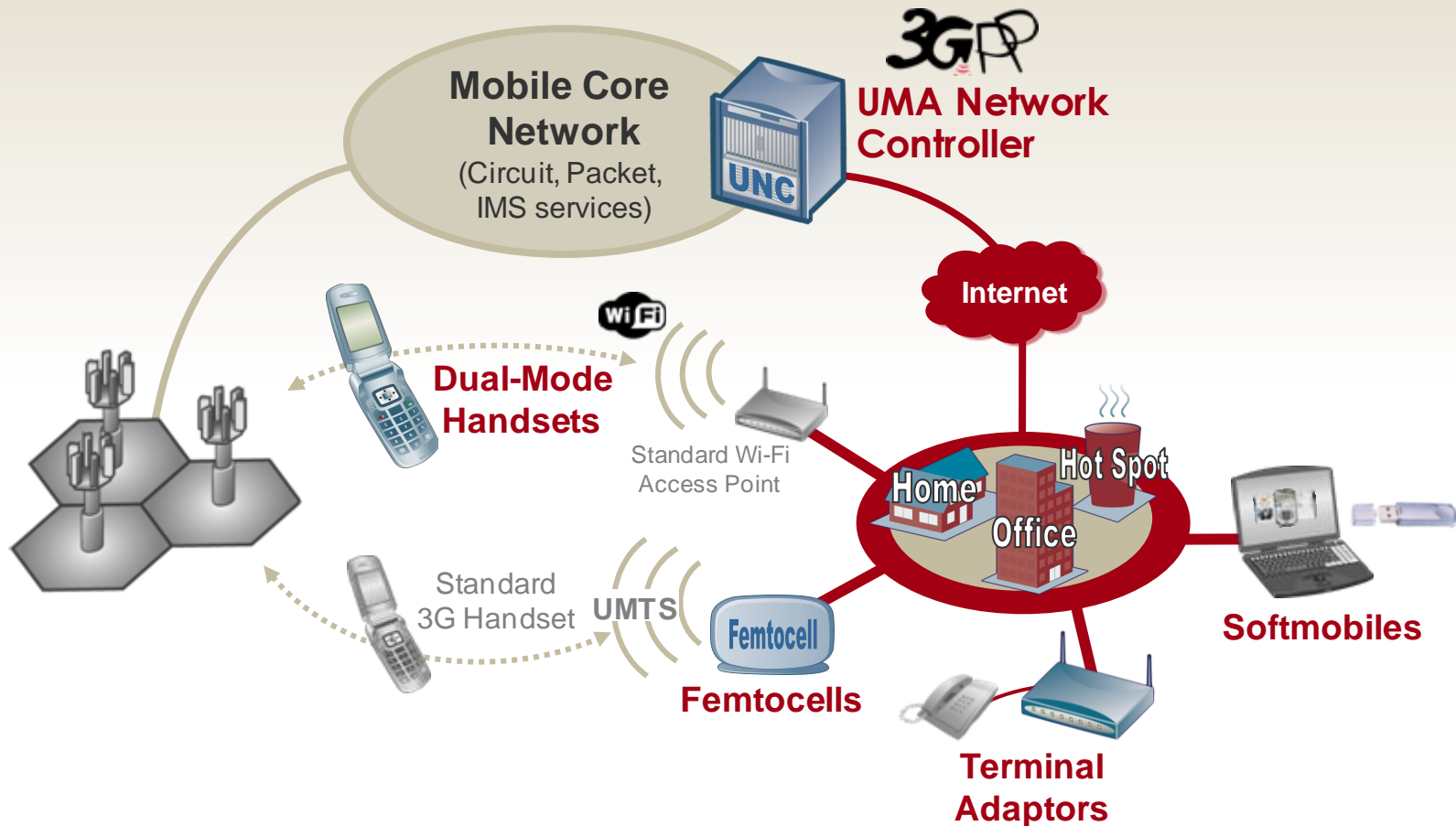


**Lower Capital and
Operational Expenses**

UMA

The UMA Opportunity

A single platform to deliver a range of FMC services, and leverage the cost and performance advantages of broadband



Strong Industry Support



“...UMA is at the heart of our convergence strategy.” Sept. 9, 2008



Georges Penalver
Executive Senior Vice-President,
Group Strategic Marketing
and Orange Labs

UMA is “so compelling and so inevitable.”

May 12, 2008



Jim Balsillie
Co-Chief
Executive Officer

UMA Dual-Mode Handset Services

Growing handset portfolio

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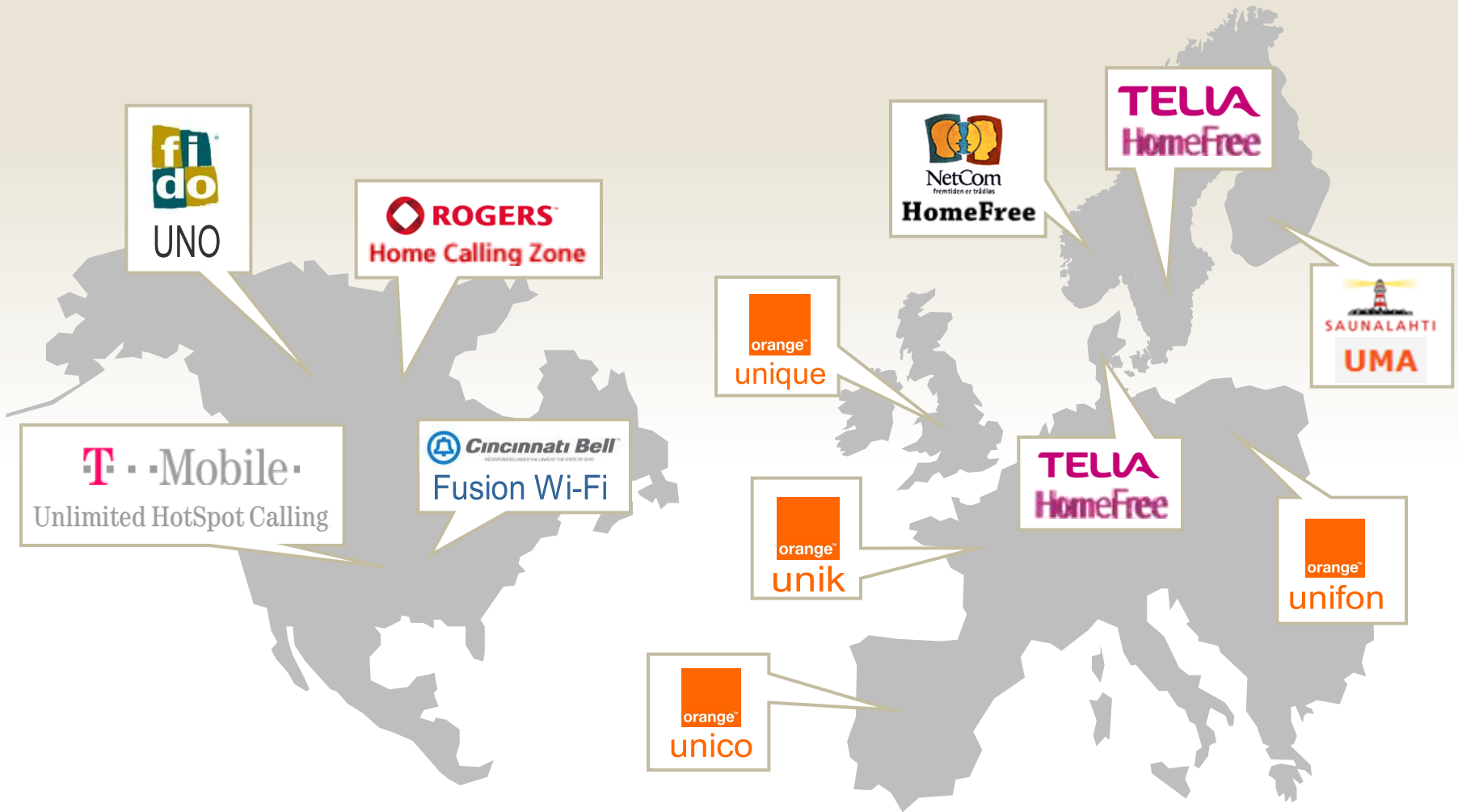
Mainstream handsets, from mainstream vendors,
at mainstream prices, with mainstream performance

Now with 3G!

UMA Dual-Mode Handset Services

Growing operator deployments

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UMA Dual-Mode Handset Services

Operators expanding UMA value proposition

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Connected Home

Connect mobile phone to services on WLAN



HomeZone Services

Home-triggered presence updates and file transfers

ShoZu

PLAZES

Compelling Data

Great mobile web and TV experience on Wi-Fi

Google

facebook

You Tube

myspace[®]
a place for friends

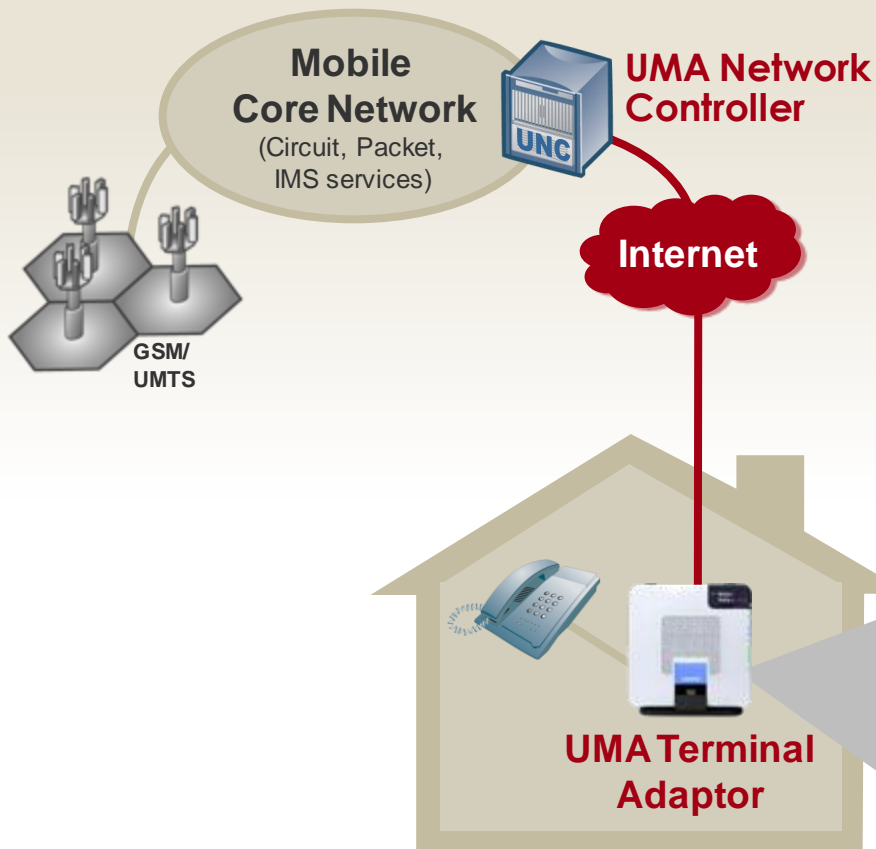
Low Cost Calling

Discounted mobile calling on Wi-Fi



UMA Terminal Adaptor Services

Enter the growing broadband telephony market



Operator Benefits

- Grow revenue with a mobile branded fixed telephone service
- Reduce mobile churn through bundling with a fixed service

Subscriber Benefits

- Low-cost, high-quality fixed phone line for home

..T..Mobile..@Home

The \$10-a-month home phone.
Save up to \$600 a year*

Say goodbye to expensive home phone bills and hello to the \$10-a-month home phone. T-Mobile @Home not only includes unlimited nationwide calling, but you can even keep your same home phone number.

buy now ▶

Already a T-Mobile customer? [Click here](#)

How much could you save?	
Enter monthly home phone bill:	\$ _____ a month
T-Mobile @Home	Only \$10 a month*
You could save up to:	\$? _____
	per year
<small>Don't know your current bill?</small>	<small>Check the national average</small>

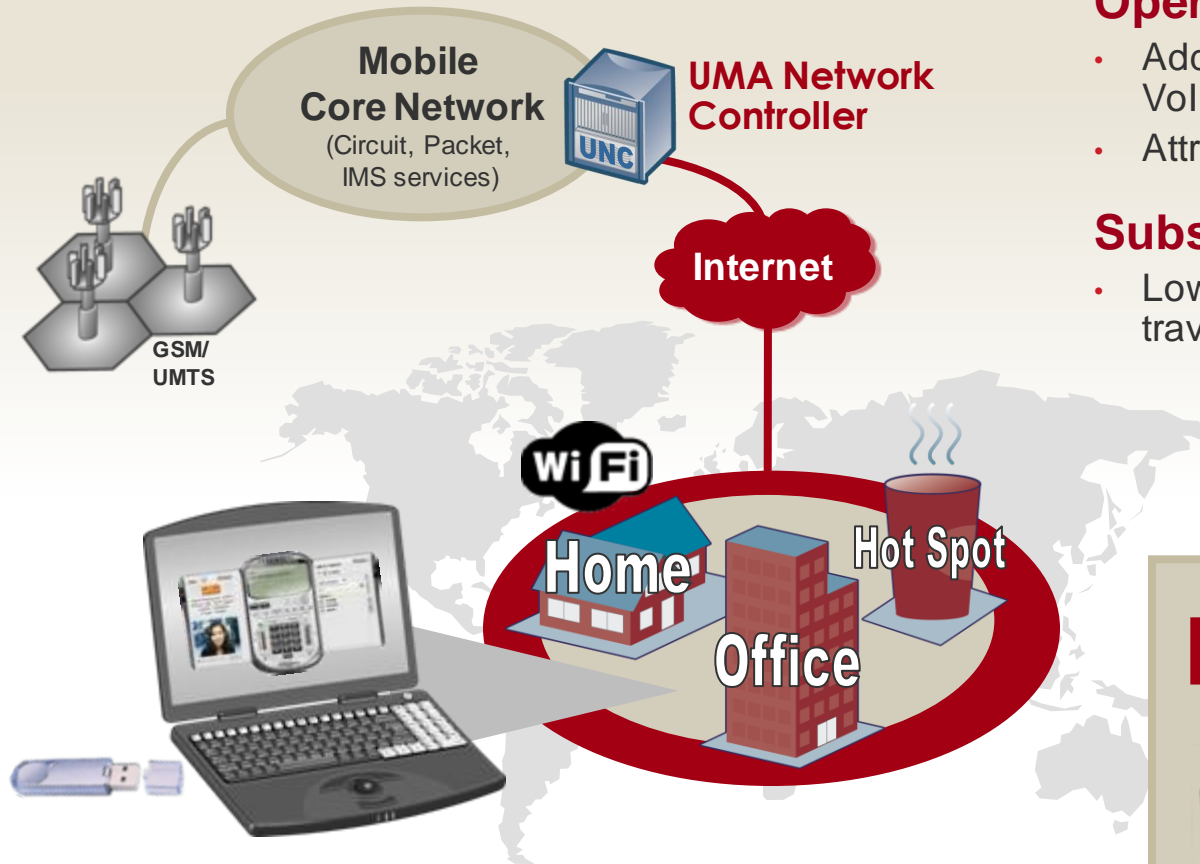
..T-Mobile..@Home *based on the national average.



UMA Softmobile Services

Low-cost mobile calling for international travelers

UMA
TODAY



Operator Benefits

- Address growing threat from new VoIP operators
- Attract high-value subscribers

Subscriber Benefits

- Low-cost mobile calling when traveling abroad

Launched this week!



USB key to
make calls from
your laptop

Please visit
www.UMAToday.com

Questions?
info@UMAToday.com

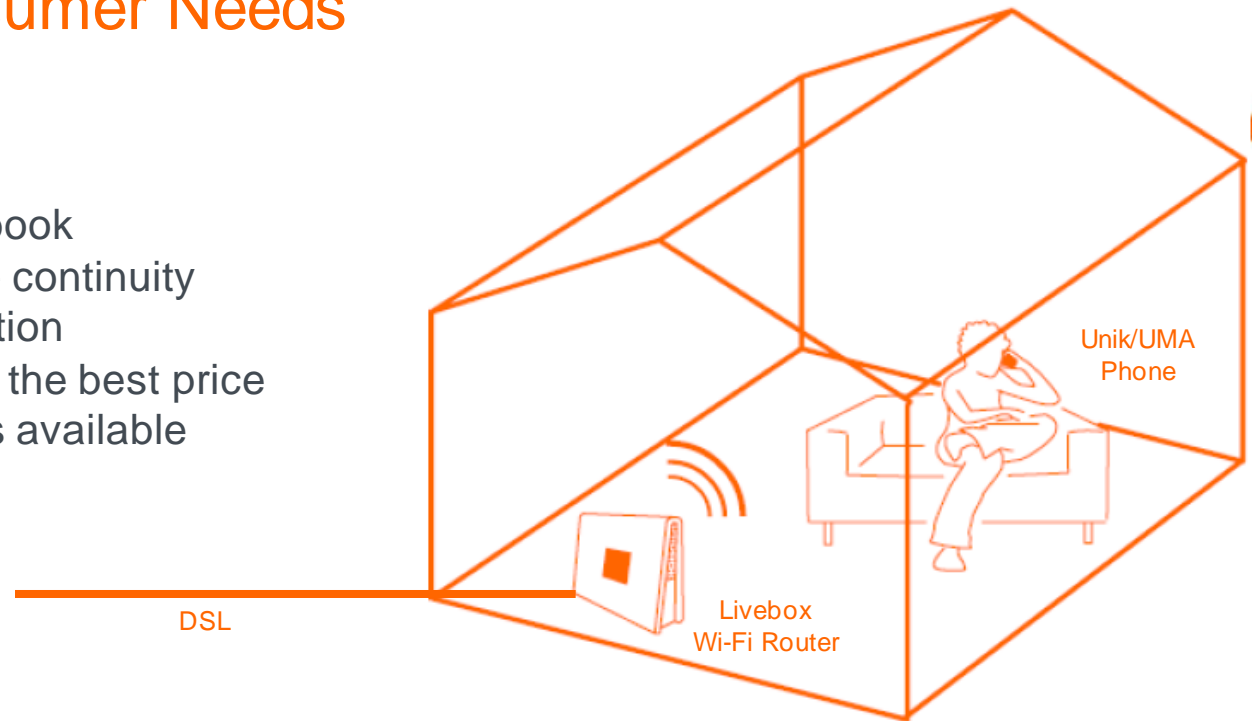


Lauren Town
Marketing Director - Unik
Orange/FT Group

Orange Unik

Meeting Consumer Needs

- ❑ a single phone
- ❑ a single number
- ❑ a single voicemail
- ❑ a single address book
- ❑ voice/data service continuity
- ❑ automatic connection
- ❑ the best network / the best price
- ❑ all mobile features available



Unik: a simple and seamless experience
designed to make life easier for the customer

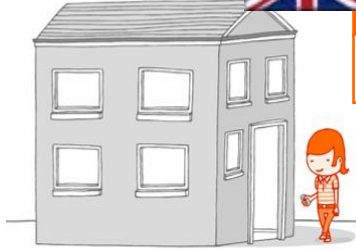
Unik is launched in 4 countries

Consumer and business markets



Unique / Unique for business

Launch date: Nov 2006



Unifon / Unifon SOHO

Launch date: Apr 2007



Unik / Unik for Business

Launch date: Oct 2006



Unico / Unico para empresas

Launch date: Feb 2007



Unik offer in France

Inexpensive Mobile Calling on Wi-Fi (Home, Office and HotSpot)

2 choisissez votre option Unik

Appels illimités 24h/24, 7j/7 initiés depuis votre mobile Unik connecté à une Livebox et depuis 30 000 hotspots* Orange wifi access en France métropolitaine.

promo spéciale Famille

promo 2 mois -50%

3€/mois avec votre mobile unik multipliez votre temps de parole par 2 vers les fixes et mobiles	4€/mois mobiles Orange*	5€/mois mobiles Orange*	12€/mois mobiles Orange*	20€/mois fixes à l'international** mobiles Orange*
fixes* et internet illimité*				
bon plan unik pour mobicarte	16h ~ 20h forfaits bloqués Zap	24h/24 et 7j/7 tous forfaits y compris forfaits bloqués		24h/24 et 7j/7 tous forfaits non bloqués

*en France métropolitaine **voir liste ces pays concernés dans les mentions légales



Available to postpaid and pre-paid subscribers

Over 1.3 million Orange customers use a Unik mobile.

No need to worry
about my mobile
phone bill

***I get unlimited calls from
home or hotspots***

***Unik works just like any other mobile
phone, with my usual address book
and mobile number.***

Unik is easy and
comfortable to use

***I don't need to worry about which network I am using, Unik
automatically connects to a Livebox, Wi-Fi router or a
hotspot.***

***Even if I leave Wi-Fi coverage, my call
continues without interruption.***

I can now make
mobile phone calls
anywhere at home,
and I no longer
have missed calls

***I get better mobile coverage at
home thanks to the Wi-Fi
coverage from my Livebox***

unrestricted

Unik/UMA myths

- **Myth: There are not enough UMA handsets**
 - **Not true:** Orange has a large selection of Unik handsets that span tiers
- **Myth: UMA is a 2G technology**
 - **Not true:** Orange has already announced two 3G Unik handsets, and has many planned for 2009
- **Myth: Wi-Fi phones have poor battery life**
 - **Not true:** Talk and standby times for Unik phones are equivalent or better than non-Unik phones
- **Myth: Wi-Fi phones are expensive**
 - **Not True:** Orange has Unik phones spanning the device tiers, from “free” to enterprise-class phones

3G/UMA Phones



More
Soon!

2G/UMA Phones



Orange objectives for Unik

KPIs for a Home Zone Service

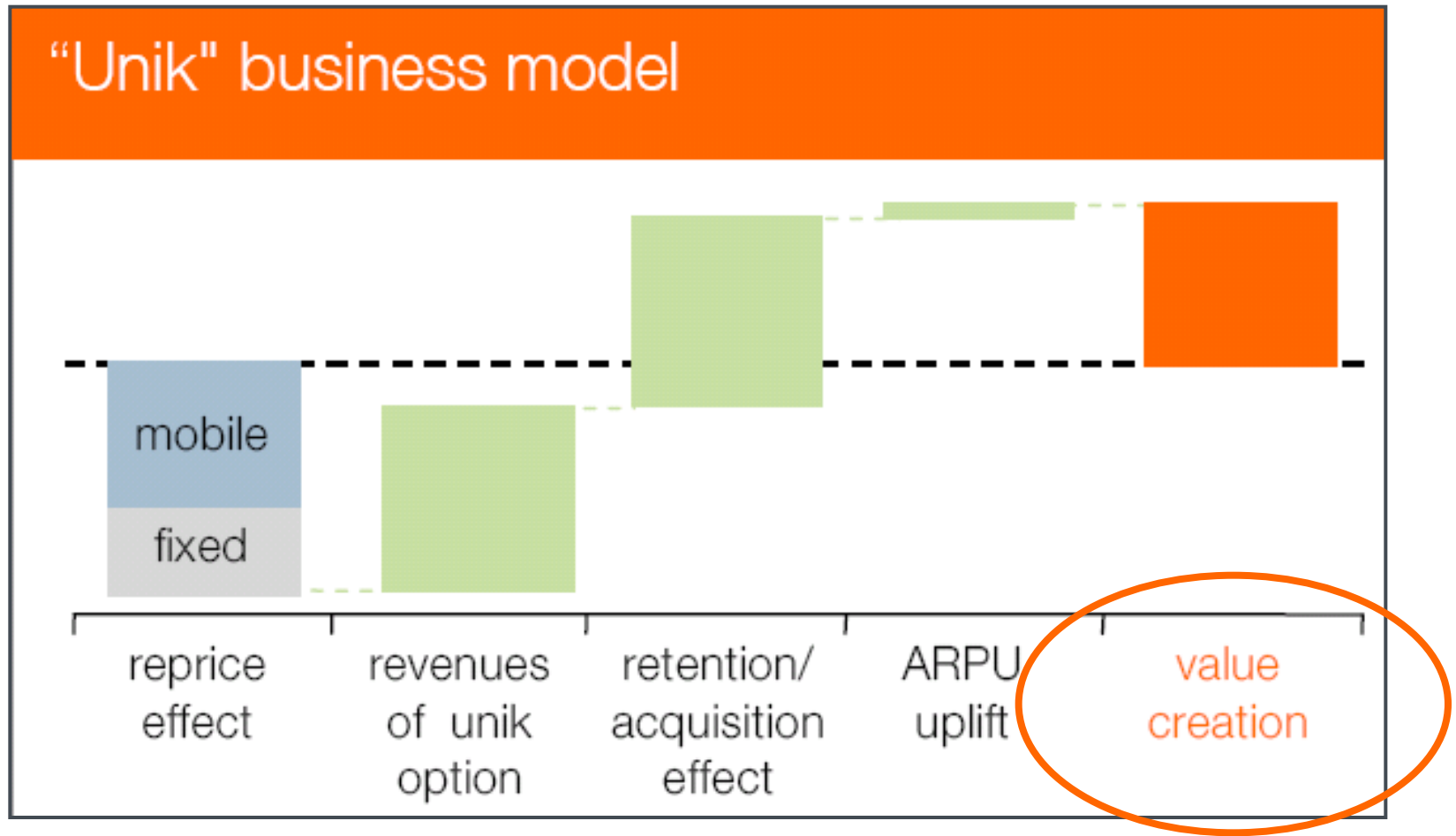
Household ARPU	Churn reduction	Customer satisfaction	Quality of Service
<p>Measure overall household ARPU (all mobiles within the household + broadband + VoIP + TV + PSTN).</p> <p>Not easy if your mobile and broadband business units are separate.</p>	<p>Reduced mobile churn because of improved indoor coverage.</p> <p>Increased tenure on household contract as customers have both mobile & broadband contracts with you.</p>	<p>Recommendation to friends & family.</p> <p>Proportion of calls to Customer Services</p> <p>Average Customer Services call duration</p>	<p>Successful handovers between access point and macro network</p> <p>Dropped call rate</p> <p>Perceived voice quality</p>

Measuring Unik – Success!

KPIs for a Home Zone Service

Household ARPU	Churn reduction	Customer satisfaction	Quality of Service
+19€	2.6 to 4 times less	80% of users recommend Unik	Near 100% successful handover rate
Results of a quantitative study carried out on Unik customers in France. The study looked at ARPU and traffic in households with at least one Unik phone. The study looked at usage 3 months before subscribing Unik compared to 6 months after.	Churn rate for Orange bi-equipped households is between 2.6 and 4 times less than Orange mono equipped households.	Average Customer Services call duration for a Unik call is the same as for a non Unik call	Lower dropped calls rate than GSM No perceived problems with call quality

Unik delivers value creation



Orange direction for Unik

Expanding Unik value to consumers

Today

Connectivity to the Livebox



@Home **On the move**

Voice

Guaranteed indoor coverage and unlimited mobile calls when connected to my Livebox	Extension to Wi-Fi Hotspots
--	-----------------------------

Tomorrow

Interaction with the Digital home



@Home **On the move**

Voice

Indoor coverage for voice calls	Extension to WiFi Hotspots
---------------------------------	----------------------------

Data

Enhanced experience of multimedia services (HD TV with dedicated indoor coverage, unlimited surf on Orange World & the internet, faster music download, automatic upload of my photos ...)	
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Digital Home

Interact with my Digital Home (Vote & interact with TV programmes, access, share and play multimedia content on any home device)	Keep connected to Digital Home (Record TV programmes, access photos, video and music stored at home ...)
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Other UMA deployments

Operators

T-Mobile (USA)

 T-Mobile Unlimited HotSpot Calling

Rogers Wireless (Canada)



Telia Sonera (Scandinavia)



Cincinnati Bell (US)



Products

Fixed line telephony (T-Mobile US)



Home phone
plugs into
UMA router

Unik PC (Orange Business)



USB key to
make calls
from your
laptop

Net & Unik (Orange France)



Boxed set
with Livebox
and UMA
handset

UMA and Femtocells

Competitive or Complementary?

- **Femtocells**

- Small, low cost 3G indoor base stations
- Designed for deployment by customer
- Leverage existing internet connection for backhaul

- **Key Orange considerations**

- Are femtocells a potential alternative to UMA for Unik service
- Will femtocells replace or complement Wi-Fi?
- What role could femtocells play in network coverage

Drivers for Operators

Home Zone Services

Gain a foothold in home

To ensure a place within the Connected Home future

- Displace fixed line
- Replace fixed line
- Get broadband customers
- Develop Connected Home services

Maintain & increase mobile ARPU

In the face of downward pressure on mobile voice revenues

- Develop mobile broadband usage
- Capture value from fixed voice

Optimize network resources

To avoid macro network overload due to increasing mobile data usage

- Use fixed broadband backhaul
- Offload macro network

Comparison: Femtos & UMA for Operators

Home Zone Services

Gain a foothold in home

To ensure a place within the Connected Home future

Maintain & increase mobile ARPU

In the face of downward pressure on mobile voice revenues

Optimize network resources

To avoid macro network overload due to increasing mobile data usage

<p style="writing-mode: vertical-rl; transform: rotate(180deg);">U M A</p>	<ul style="list-style-type: none"> ✓ UMA fixed telephony launched by T-Mobile US ✓ Broadband & UMA bundles launched by Orange ✓ Takes advantage of installed base of Wi-Fi devices in the connected home 	<ul style="list-style-type: none"> ✓ HD mobile TV on UMA now available ✓ Unlimited Surf offer launched by Orange ✓ T-Mobile US has launched both mobile and fixed telephony on UMA 	<ul style="list-style-type: none"> ✓ Takes advantage of existing Wi-Fi router installed base ✓ No Wi-Fi management required ✓ Laptops use Wi-Fi when at home to avoid mobile core network overload ✓ No impact on RAN evolution
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">F e m t o</p>	<p>? All this is possible, but not yet proven</p>	<p>? All this is possible, but not yet proven</p>	<ul style="list-style-type: none"> ? No installed base of femto compatible CPE ? Additional CPE to manage ? Femtocell upgrades required to match macro RAN evolution

Drivers for Consumers

Home Zone Services

Unlimited tariffs

Price benefits

- Cheaper mobile calls
- No fixed line monthly fee
- Get more for less with multi-play bundles

Improve indoor coverage

Usage benefit

- No missed calls on the mobile
- Make voice calls at home
- Faster mobile broadband at home

Convergence benefits

Service benefit

- A single provider
- A single bill
- A single customer service

Comparison: Femtos & UMA for Consumers

Home Zone Services

Unlimited tariffs

Price benefits

Improve indoor coverage

Usage benefit

Convergence benefits

Service benefit

U M A	<ul style="list-style-type: none"> ✓ Enables profitably delivery of: <ul style="list-style-type: none"> • Cheap unlimited mobile calling • Cheap unlimited fixed calling • Cheap unlimited mobile data 	<ul style="list-style-type: none"> ✓ Orange surveys show very high levels of customer satisfaction with indoor coverage benefit ✓ Same CPE for both 2G and 3G handsets 	<ul style="list-style-type: none"> ✓ Orange customers can have a single bill for mobile and broadband ✓ Orange Customer Services are structured to handle mobile and broadband calls
F e m t o	<ul style="list-style-type: none"> ? Not clear that cost of femtocell will support the delivery of such services 	<ul style="list-style-type: none"> ✓ Good indication from trials and initial launches, however risk of interference must be mitigated ✗ Coverage benefit only for 3G subscribers/ devices 	<ul style="list-style-type: none"> ? All this is possible, but not yet proven

Additional considerations

Home Zone Services

Access points

How subscribers receive the home zone service

- Low Cost
- Broad availability
- Zero-touch deployments
- TCO
- Impact of macro network evolution

Handsets

How subscribers experience the home zone service

- Availability
- Battery life
- Home zone service indicator
- Support Connected Home services

Network impact

How the home zone service impacts the rest of the network and subscribers

- Minimal impact to macro RAN
- No impact on non-Home Zone subscribers

Comparison: Femtos & UMA

Home Zone Services

Access points

How subscribers receive the home zone service

Handsets

How subscribers experience the home zone service

Network impact

How the home zone service impacts the rest of the network and subscribers

	<u>Access points</u>	<u>Handsets</u>	<u>Network impact</u>
U M A	<ul style="list-style-type: none"> ✓ Majority of broadband homes already have Wi-Fi installed ✓ Inexpensive products from many major CE vendors ✓ No access point management required ✓ Independent of macro network evolution (HSPA+, LTE) 	<ul style="list-style-type: none"> ✗ Requires 2G or 3G UMA-enabled handset <ul style="list-style-type: none"> – Home zone service indicator – Connected home services ✓ Talk/standby time same/ better than GSM 	<ul style="list-style-type: none"> ✓ No macro network interference ✓ No impact on non-home zone service subscribers
F e m t o	<ul style="list-style-type: none"> ✗ No installed base of access points ✗ Expensive pre-standard products from specialist vendors ✗ Requires new and expensive access point management systems ✗ Access point upgrades required to track macro network evolution 	<ul style="list-style-type: none"> ✗ Requires femto-optimized handset for complete home zone services <ul style="list-style-type: none"> – Home zone service indicator – Connected home services ? Talk/standby time expected to be same/ better than GSM 	<ul style="list-style-type: none"> ✗ May need dedicated channel (different from macro sites) to mitigate interference concern ✗ Expect negative battery impact to all 3G handsets on network

Then what is the role for femtocells?

UMA and Femtocells

Orange Conclusions



UMA = Home Zone

Fully meets Home Zone service requirements

- Large installed base of low cost home and hot spot Wi-Fi APs
- Enables true “Connected Home”
- Independent of RAN evolution



Femtocells = Low Cost Coverage

Many challenges avoided when applied to enterprise opportunity

- Eliminates need for femto-optimized handsets
- Reduces interference concerns
- Lowers cost pressure on femtocell AP

Orange will continue to capitalise on successful UMA deployments in the consumer market.

Orange has no plans to deploy Femtocell for consumer markets.

Conclusion

- **Unik (and UMA) are already successful**
 - Increased ARPU, reduced churn
 - Customer satisfaction, service quality
 - A mature, widely deployed 3GPP technology
- **UMA is ideal for home zone service**
 - Meets operator and subscriber requirements
 - Wi-Fi is mature, low-cost and widely deployed
- **Femtocells are well suited for enterprise use**
 - A less expensive coverage solution
 - Avoids technical/business challenges

Thank You

www.unik.orange.fr



UMA & Femtocells: Complementary Technologies



Questions & Answers

For post-conference questions, please email:
Info@UMAToday.com

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