A 3G story that makes sense



THE NEXT GENERATION NETWORK

22 mln pop / 240k km²



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Terrain Map

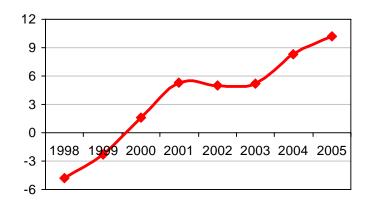
Elevation (m)	Novoselycja	100km
	Novoselycja Sighetu Marmatiei Seljatyn Radauti Visnu de Suc Selva	Balta
Emőd Tiszaújváros Balkany Satu Mare	Seljatyn Radauti Stefanesti Bafti	Ribnita
Hajduboszormeny	Bala Mare Success Solid Success	C. C. A.
Hajdúszoboszló	Tirgu Lapus Gura Humorului Falticeni Hirlaus	Krasni Okny
Hajdúszoboszlo Jászkisér Karcag Foldes Szolnok Simleu Silvanie Zalau	Tirgu Lapus Vatra Dornej Falticeni Hirlau Nasaud Vatra Dornej	Orhei Dubasari
Szolnok Zalau		
Mezőtúr Szeghalom	Cherla Deda Toplita Orea Platra-Neamt Tibena Oco Nisporent	Chisinau
Mezőtúr Szeghalom Tiszaföldvár Mezőberény Szentes Békéscsaba Szentes Békéscsaba	Cluj-Napoca Reghin Lapusna Buhusi Roman Vacun	Tighina
Szentes Békéscsaba Beius Gilau		Causeni
Chisineu-Cris Vascau	Alud Timaveni Odorheiu Seculesc Onesti Birlad Blaj Medias Tirgu Ocna Adjud Beresti	Lisne
Hódmezővásárhely Pincota	Alud Timaveni Odorheiu Seculesc Onest	Comrat
Mako Arad Brad	Blaj Medias Tirgu Ocha Adjud A Berest	Derezyne
Nadlac Periam	Sebes	Ciadir-Lunga
Nakovo Jimbolia Timisoara	Sebes Rupea Sibiu Romania Sfintu Gheorghe Marasesti Cahul Tirgu Bujor B	Glavani
Lugol		olhrad
Melenci Buzias Ofelu Rosu	Branistea Nanesti Sacole Sacole Popestio Galati	Krynycne Kilija
Zrenjanin Deta - Bocsa Plandiste Ilandza Aliburger - Anna Cimpir La Neag	nih Mataja Cimpulung Sugar Sinala Rimnicu Sarat Boldu Braila Macin	Izmail
llandza Alibunar Anina	Balle Olanesti u. Jiu Rimnicu Vilcea Pucloasa Buzau	Tulcea Sulina
	u Jiu	
Beograd Bela Crkva Motru	Priest	Babadag
Grocka Pozarevac Orsova Drobeta-Turnu	Severing States and Several Second Se	
Obrenovac	Slatina Titu Buftea Bucuresti Slobozia	
Arandjelovac Petrovac Majdanpek Vinju Mare Negotin	Craiova Videle Progresul Medgidia	
Topola	Craiova Segarcea Caracal Rosiori de Vede Alexandria	Constanta
Kragujevac Zlor Colafat Bird	Segarcea Caracal Roslori de Vede a Alexandria Maceau de Jos Publeio Orjahovo Turnu Magurele Segarcea Alfatar Segarcea Caracal Roslori de Vede Alexandria Ruse Biserci Srediste Vizoaga Alfatar Isperih Tervel	ostine <mark>sti</mark>
Cacak Paracin Zajecar Lom Kraljevo Cuprija Cicevac Vatakonje Kula	Macesu de Jos Putinen: Alexandria Ruse Biserci Alfatar Orjahovo Turnu Magurele Isperih Tervel	angal <mark>ia</mark>
Brezna Krusevac Aleksinac Belogradcik	Orjahovo Turnu Magurele Senovo Isperih Tervel Dobric	

Zapp

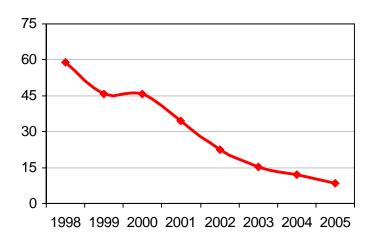


GDP (%)

Zapp

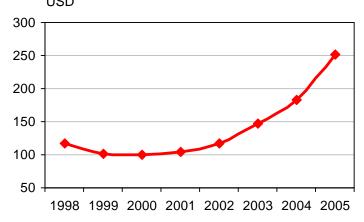




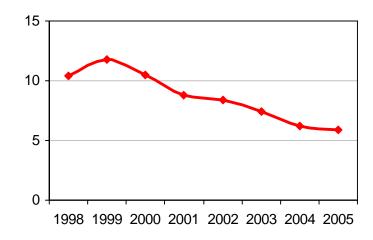


Source: Romanian Yearbook – National Institute of Statistics

Monthly average net income / capita

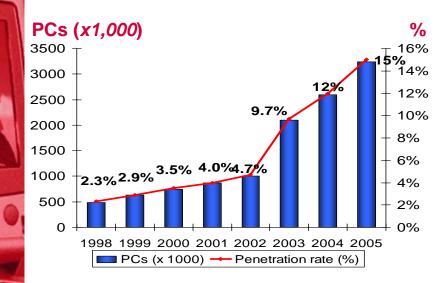


Unemployment rate (%)

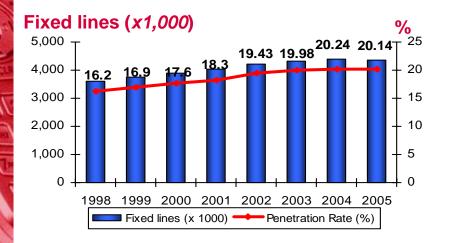




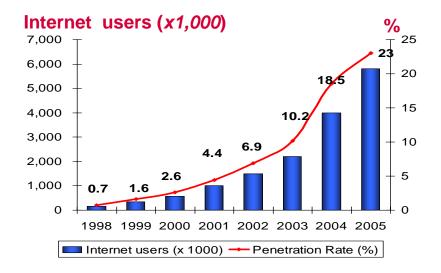
Telecommunications Market



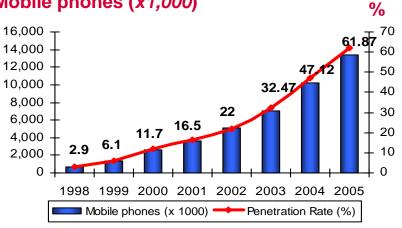
Zapp



Source: MCIT, ANRC, EIU Country indicators *estimates



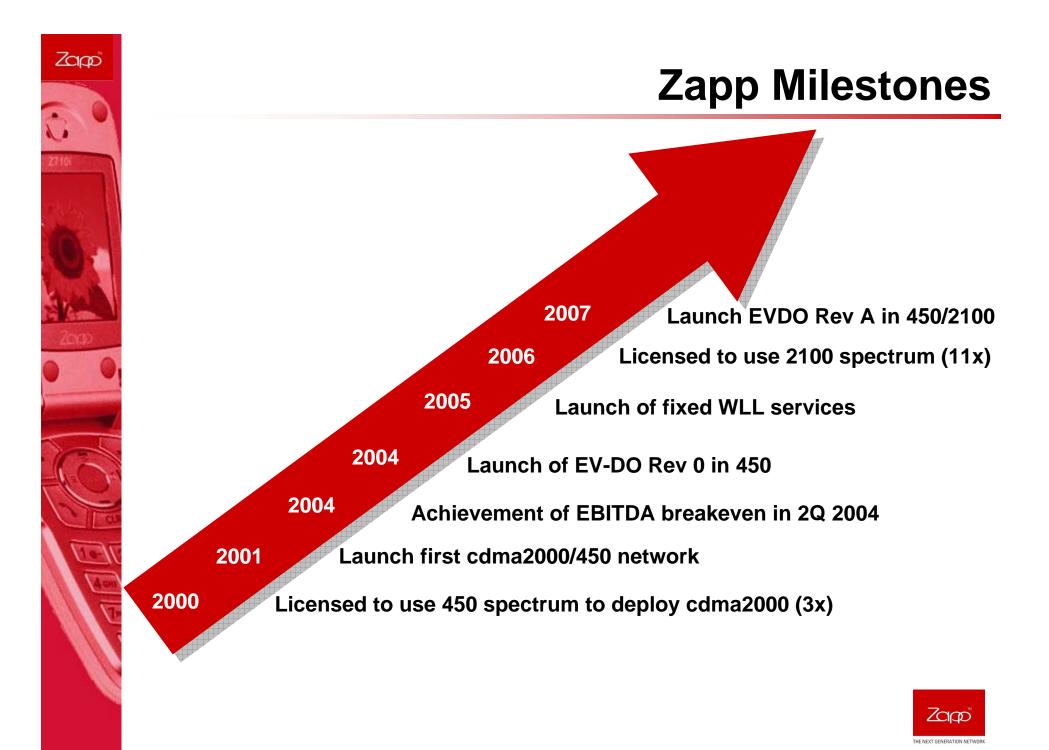






Zapp Overview & Strategy

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Success Factors

As the 4th entrant into the market (competing with Vodafone, Orange and Cosmote national GSM operators), Zapp managed to succeed thanks to its:

Technology choice

Zapp

- cdma2000 to provide support for both high quality voice and high speed data services with intensive traffic profiles
- Multi band support and smart interoperability with Bluetooth and Wi-Fi devices to enable innovative mobile applications

Spectrum choice

- 450 spectrum to achieve a large & cost-effective coverage
- 2100 spectrum overlay to enable high capacity plant for 3G services

Strategy choice

- Convergent positioning at the account level to provide both urban & rural, mobile & fixed, voice & data services (enabling cross-selling)
- Divergent positioning at the service instance level to enable specialized terminals to be used independently (unlike typical 3G)
- Enabling affordable flat-fee based connectivity to the most valuable content for the end-user (via local peering and content self casting) Zapp

Onward Strategy

Corporate Zapp SME, SOHO **Consumers** ZAPP Mobile DATA WLL

Voice

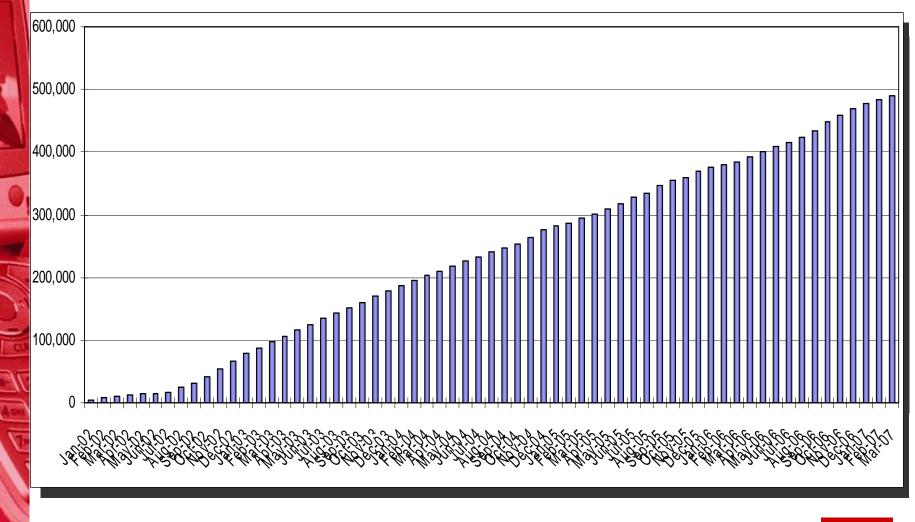
Zapp

After the SME/SOHO initial focus, Zapp targets additional segments and niches enabled by:

- Full nationwide coverage (450) and high capacity urban network (2100)
- Unlimited voice (on-net) and data services offering (flat-fee based)
- New terminals offering and steadily decreasing handset prices
- New mobile data features and applications (Brew, My Casting, VoIP)
- Pre-paid services introduction
- Services convergence



Customers Base



Zapp



Terminals





Zapp









• Fixed Voice and Data







Broadband data











Network

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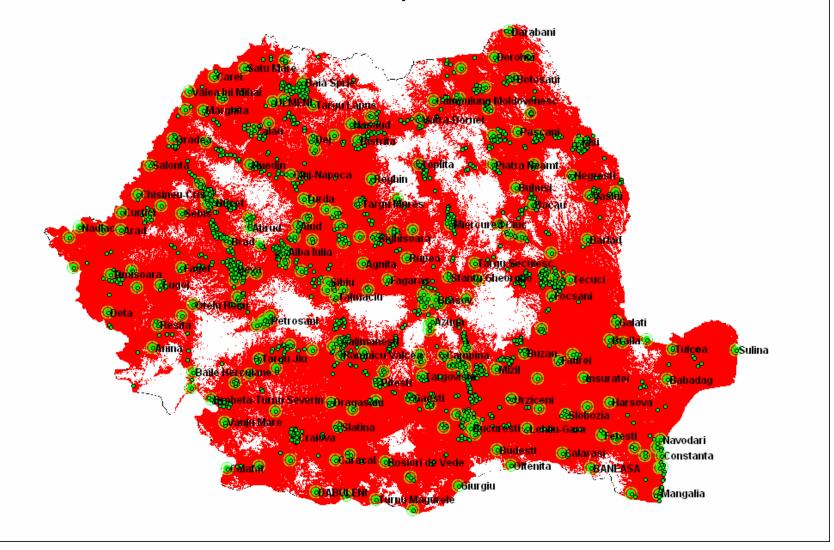


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Mobile Services Coverage

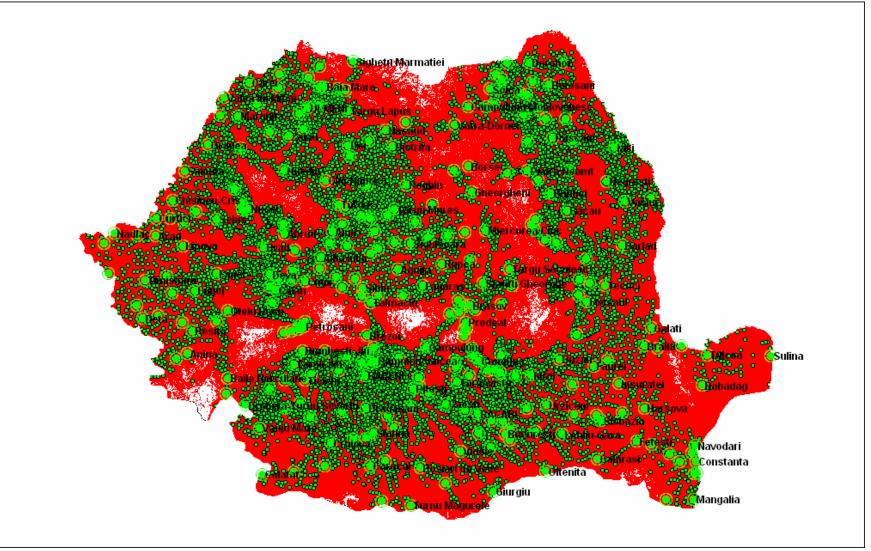
Over 1,500 localities covered for the indoor level of service, over 17,000 km of roads covered for the in-car level of service and over 180,000 square km covered for the outdoor level of service by 520 BTS



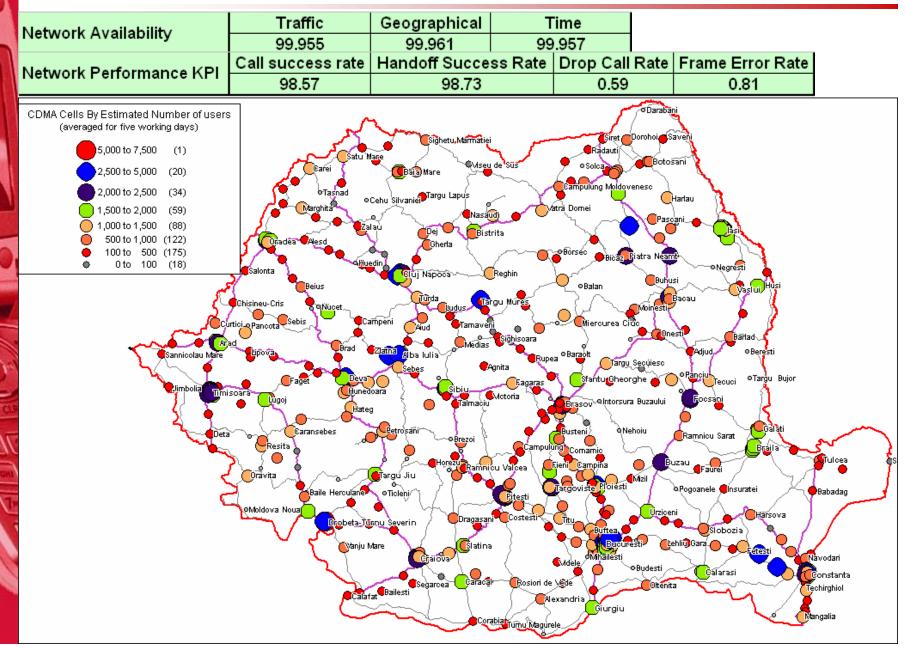


Fixed Services Coverage

Over 10,000 localities covered with indoor level of service by the same network



Traffic & Performance



Zapp



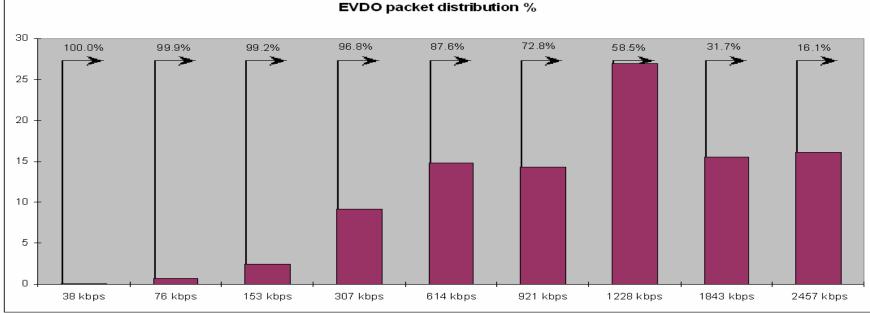
Usage Profiles

-Average Voice usage/sub/month: 450 MOU (25mErl@BH)

-Average Data usage/1x Limited sub/month: 300 MOU & 40 MB -Average Data usage/1x Unlimited sub/month: 5600 MOU & 800 MB

-Average Data usage/DO Limited sub/month: 1800 MOU & 600 MB -Average Data usage/DO Unlimited sub/month: 4800 MOU & 2000 MB

-Average user data speeds: 60-110 kbps (1x) and 500-900 kbps (DO) -Packets speed distribution below (DO Rev0)



450/2100 Rollout

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Dual-band concept

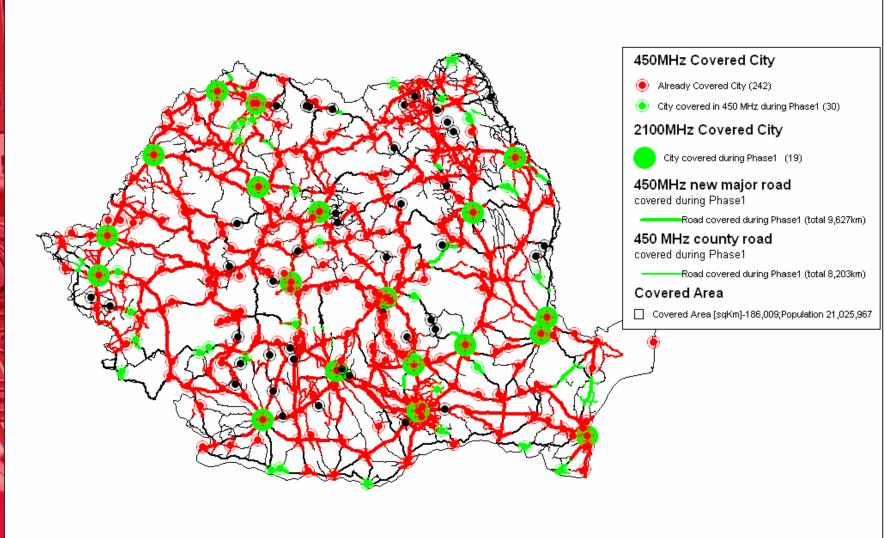
- 450 spectrum (2x4.5MHz) can accommodate up to 3 cdma2000 carriers
- Zapp dedicates 2 carriers for the 1xRTT voice/data services and 1 carrier for the EV-DO broadband services
- 1 single DO carrier is sufficient for the mobile broadband services offering (using Rev0 & RevA technology) but not enough for the mass-market positioning as portable and fixed broadband connectivity solution (as DSL/Cable alternative) without heavy cell-splitting in the urban environments.
- 2100 spectrum (2x15MHz) can accommodate up to 12 additional cdma2000 carriers
- Zapp dedicates 3 carriers for the 1xRTT voice & data services and 9 carriers for the EV-DO broadband services (having the option to deploy 1 UMTS carrier for roaming business opportunity)
- Dual-band antennas, base stations and terminals available from several vendors
- 2100 spectrum allows Zapp network to smoothly evolve towards RevB & RevC in order to protect the leadership positioning in terms of data speeds offering while 450 spectrum will continue to provide/enable the largest broadband coverage footprint
- Same urban & rural, voice & data services (no divide) with large coverage & high capacity offered at the same time, by the same network/technology, through the same terminals





Phase 1: 450/Mobile & 2100/Portable – June 2008

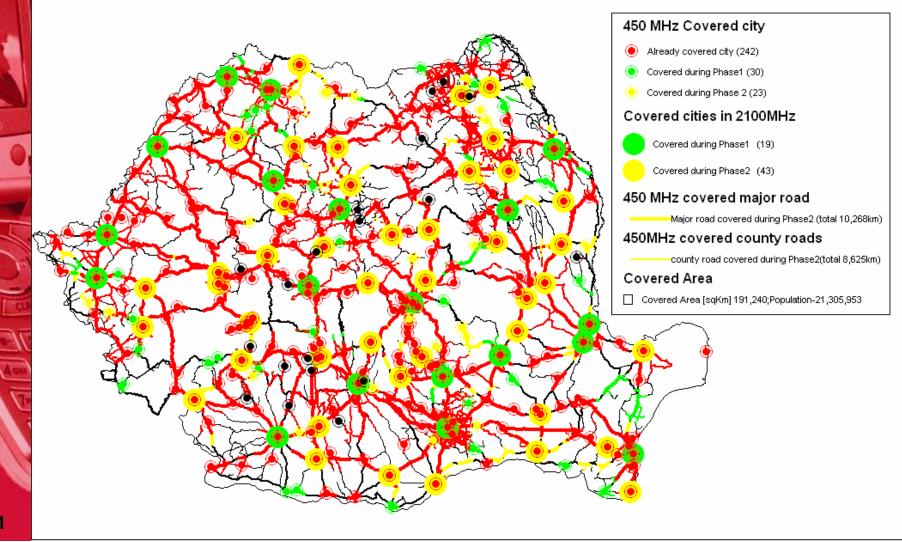
272 cities covered by the 450 network layers (1xRTT & DO Rev0 & DO RevA) 19 cities covered by the 2100 network layers (DO RevA)





Phase 2: 450/Mobile & 2100/Portable – Dec 2009

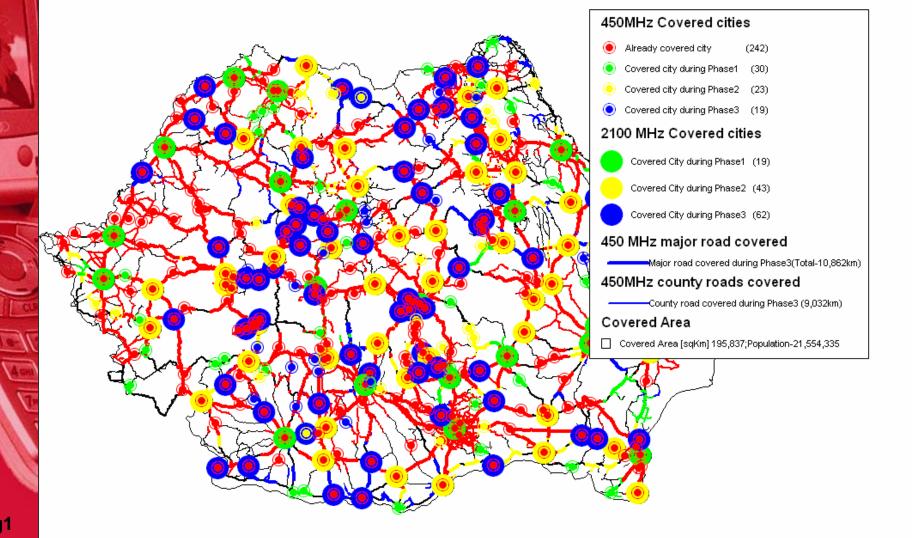
295 cities covered by the 450 network layers (1xRTT, DO Rev0 & DO RevA) 62 cities covered by the 2100 network layers (DO RevA & 1xRTT)





Phase 3: 450/Mobile & 2100/Portable – Dec 2011

314 cities covered by the 450 network layers (1xRTT, DO Rev0 & DO RevA) 124 cities covered by the 2100 network layer (DO RevA & 1xRTT)





450/2100 Terminals

Phase1:

 DO RevA USB dual-band modem with manual switch between 450/2100 (MSM6800 based) – Q4 2007

Phase2:

- 1xRTT low-cost dual-band handset with automatic switch/handover between 450/2100 (QSC1100 based) – Q2 2008
- DO RevA USB dual-band modem with automatic switch/handover between 450/2100 (MSM6800 based) – Q4 2008
- 1xRTT & DO RevA dual-band handset/modem with automatic switch/handover between 450/2100 (MSM6800 based) – Q1 2009

Large volume commitments and favorable economies of scale for the DO RevA 450/2100 handsets & modems would be possible based on the high capacity offered by the 2100 spectrum, enabling the mass-market positioning of the DO products.



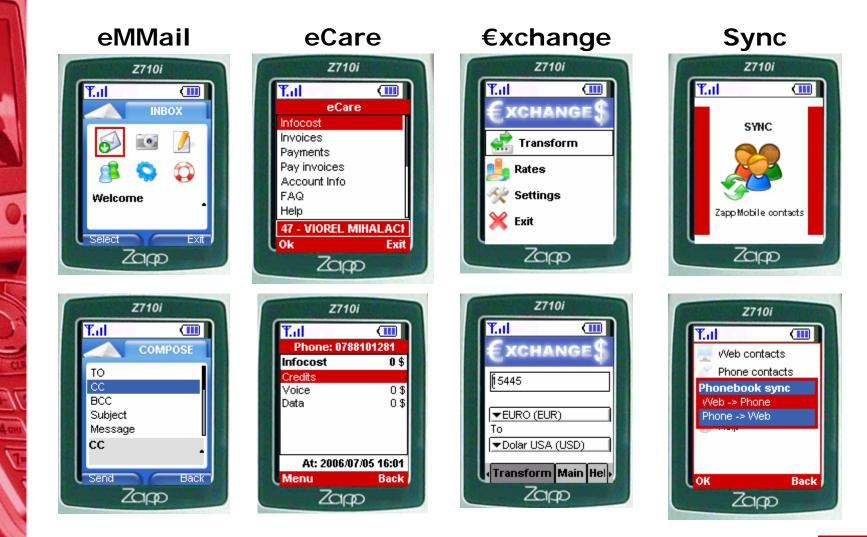
Applications

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Zapp Brew Apps

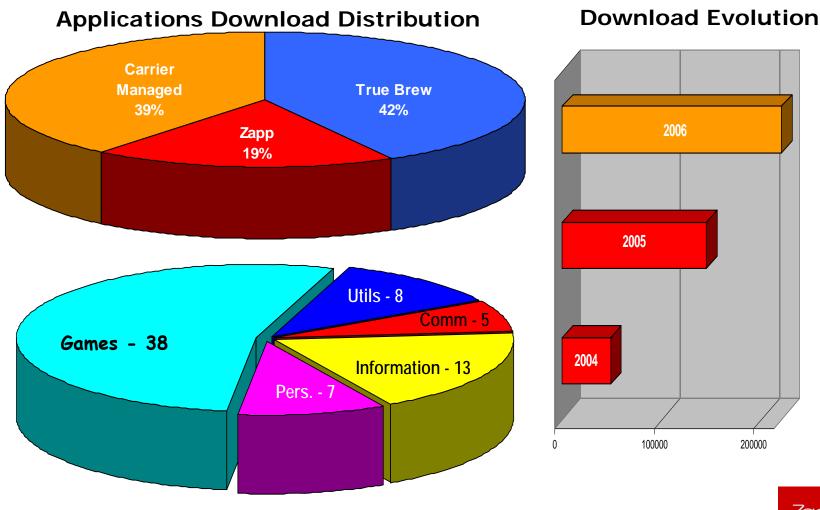


Zapp

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BREW Catalog

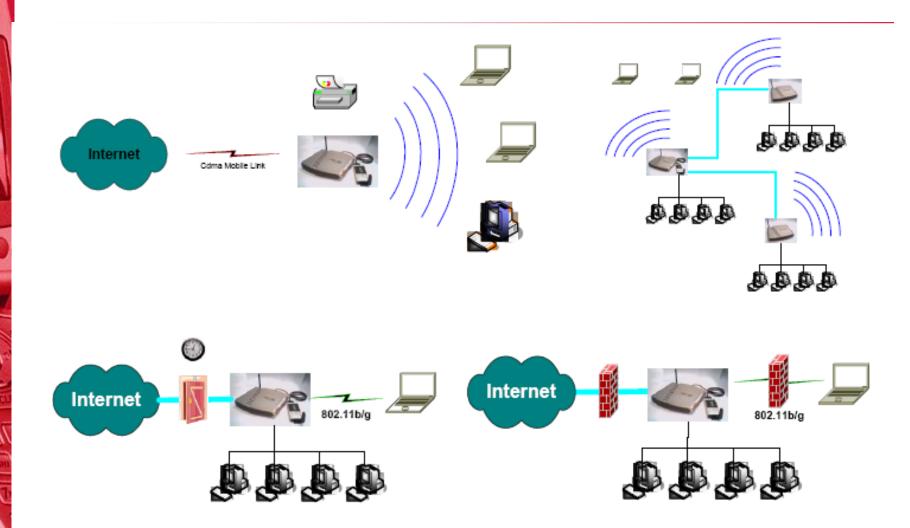


Zapp

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Mobile & Fixed Hotspots Backhauling



Zapp

Low Cost in-building data coverage solution (\$60/unit) High interoperability based on USB, Ethernet & Wi-Fi interfaces (no drivers required) Large number of applications based on Linux open source





Personalized Portal Services

Completely customizable portal services with user manageable content and optimized interfaces for PC, PPC/PDA and Mobile browsers (www.zappmobile.ro)

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"A man never tells you anything until you contradict him" - George Bernard Shaw			💴 襘 Welco	me, Victor STAN 😃
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Latest News > 14:00 Neighbourhood Networks Encouraging Internet Piracy In Romania > 13:30 Microsoft Planning To Improve The Security Of Office 2003 > 13:00 Angelina Unveils Directorial Debut > 12:30 Nicolas Cage Snaps Up GBP4m House In Bath > 12:00 Romanian suspended president confident in returning to presidency > 11:30 Iran: U.N. Warns Of More Sanctions > 11:00 Russia: Nashi Campaign Continues > 10:00 Sarkozy, Royal trade insults in TV debate > 09:00 Austria to Lower Voting Age to 16	ZappMail Free 100 MB Inbox space Free SMS notifications/month Press Review * 05/03/2007 - Estonia and Russia in diplomatic conflict * 05/02/2007 - Al-Oaida leader in Iraq, exterminated by his own people	BNR Exchange	2,4481 LEI 3,3241 LEI 4,8794 LEI	04/05/2007 2,4351 LEI 3,3136 LEI 4,8505 LEI 2,1965 LEI
Sign Leo (Jul 24 - Aug 23) This morning you may be in a bad mood and fail to communicate efficiently. Keep calm and try to sort things out! In the evening you may be invited to a	 > 04/30/2007 - Iuscenko promises free elections in Ukraine > 04/28/2007 - Are visas going to disappear by the end of the year? > 04/27/2007 - EP votes for the resignation of the World Bank chief > 04/26/2007 - Frattini offering to help Kishinev > 04/25/2007 - Russia and the European Union, between war and peace 	Info Cost Usage TOTAL	l	Units USD 0.00
party. You will have the opportunity to meet a person who may later play an important part in your life. Leo (Jul 24 - Aug 23) Updated: 2007/05/03	Weather in - Bucuresti Otopeni Temperature: 22 C Humidity: 31 % Wind direction: Vest Wind speed: 14 km/h	Billing period start: 2007/04/15 00:00:00 Updated: 2007/05/03 13:16:03 E-mail quota usage: 703 M (18%) E-mail quota limit: 3906 M		
International » Iran: U.N. Warns Of More Sanctions » Russia: Nashi Campaign Continues » Sarkozy, Royal trade insults in TV debate » Israeli FM seeks Olmert's resignation » Anti-Estonia Protests Escalate in Moscow » Colombia cuts drugs haul figure	Pressure: 1013 hPa Conditions: Cer senin Bucuresti Otopeni Updated: 16:23	TV Programme 16:00 Tanar si nelinistit 17:45 Razboiul de acasa 18:15 Doi barbati si jumatate 20:30 Academia de polítie 00:00 CSI: Miami		
Updated: 16:28	Sports News > Flash > Football > Formula One > Tenis > Basket	06:30 Emmerdale - Afaceri de familie Select the channel PROTV ▼ Select the day Today ▼ ▼ Movies only		



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Free Media Center solution to access the entire home/office content and files by streaming to any broadband mobile device with an embedded web browser/media player plug-in (www.orb.com)

