

# Mobile commerce in Czech Republic

Ondřej Částek  
castek@mail.muni.cz

# Mobile commerce

- Set of processes connected to realization of business transactions and executed via mobile technologies in real time (on line)

## Mobile technologies

- Infrastructure operated by mobile network carriers

# M-commerce applications

- Content services (sending of messages, dictionaries, ...)
- Messaging – sending SMS/MMS to customers
- Remote Access/Mobile Office (access to company's intranet)
- Emergency Services (112, 911)
- Video and audio data – usually by 3G services
- Entertainment – games, competitions, ringtones
- Tailing – purchasing or reservation of tickets (Mobitickets)
- Financial Services – banking and broking
- Payment – m-payments
- Navigation – Global positioning system
- Telemetry – automatic sending of data between machines
- Marketing services – SMS inquiries, company's logos, collecting of loyalty bonuses via mobile phone

# Determinants of m-commerce

- Mobile phone penetration
- Technologies implemented
- Services offered

# Technology bases of m-commerce

<u>0G</u> <u>PTT</u> <u>MTS</u> <u>IMTS</u> <u>AMTS</u> <u>OLT</u> <u>MTD</u>	<u>2G</u> <u>GSM</u> <u>iDEN</u> <u>D-AMPS</u> <u>IS-95/cdmaOne</u> <u>PDC</u> <u>CSD</u> <u>PHS</u>	<u>3G</u> <u>W-CDMA</u> <u>UMTS (3GSM)</u> <u>FOMA</u> <u>1xEV-DO/IS-856</u> <u>TD-SCDMA</u> <u>GAN/UMA</u>
<u>0.5G</u> <u>Autotel/PALM</u> <u>ARP</u>	<u>2.5G</u> <u>GPRS</u> <u>HSCSD</u> <u>WiDEN</u>	<u>3.5G</u> <u>HSDPA</u>
<u>1G</u> <u>NMT</u> <u>AMPS</u> <u>Hicap</u> <u>CDPD</u> <u>Mobitex</u> <u>DataTac</u>	<u>2.75G</u> <u>CDMA2000</u> <u>1xRTT/IS-2000</u> <u>EDGE (EGPRS)</u>	<u>3.75G</u> <u>HSUPA</u> <b>4G Frequency bands</b> <u>SMR</u> <u>Cellular</u> <u>PCS</u>

# Technologies available in CR

NMT	analogue, voice only
GSM	14,4 kbps
GPRS	57,6 kbps
HSCSD	171,2 kbps
EDGE	384 kbps
CDMA2000	2048 kbps
UMTS	1920 kbps

# Third generation (3G)

- Much faster data transmission than before
- Therefore new services possible
- Devices of higher performance
- New services involve multiply parties

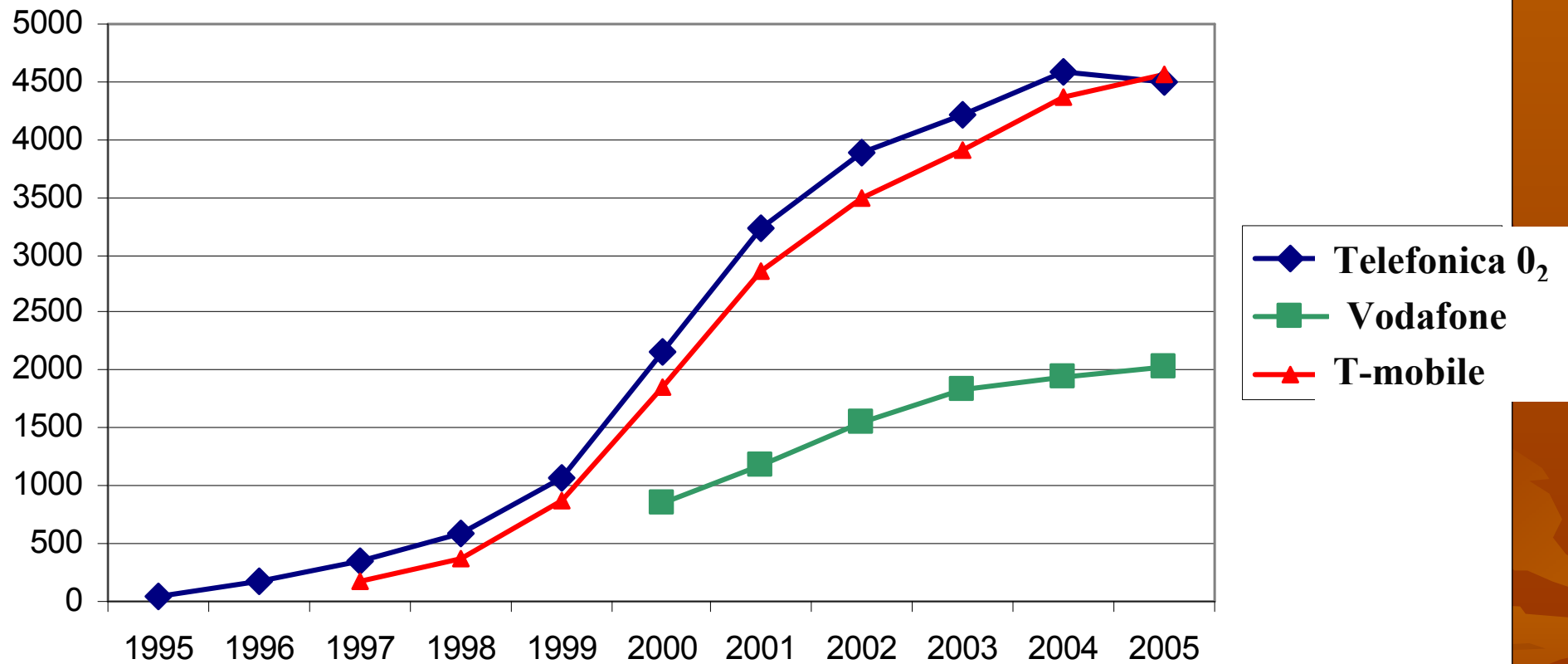
# Fourth generation

- Currently are standards under development
- At least 10 times greater capacity
- Higher speeds (100 Mbps stationary conditions, 20 Mbps at 100 mph)

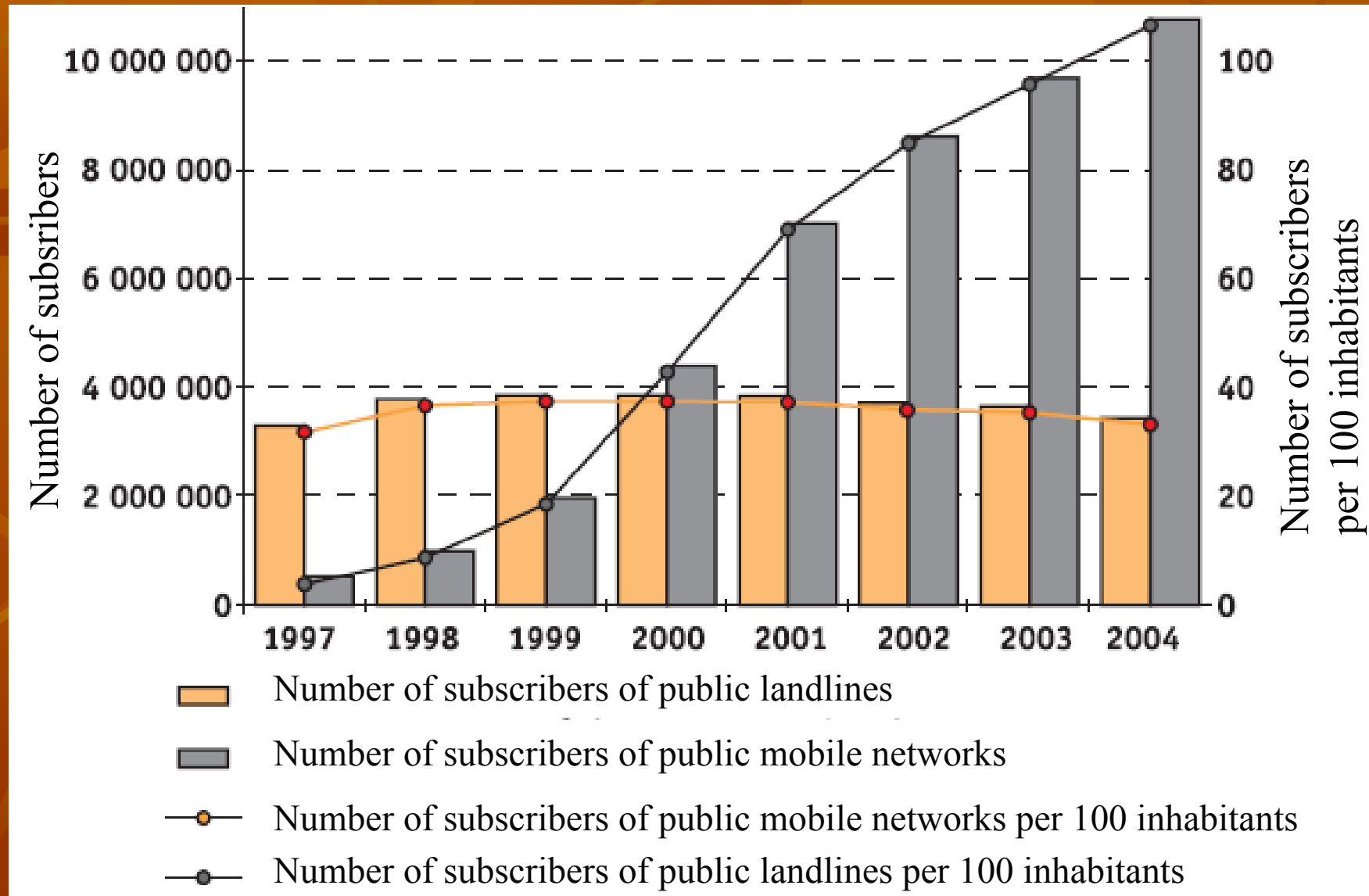


# Penetration in CR

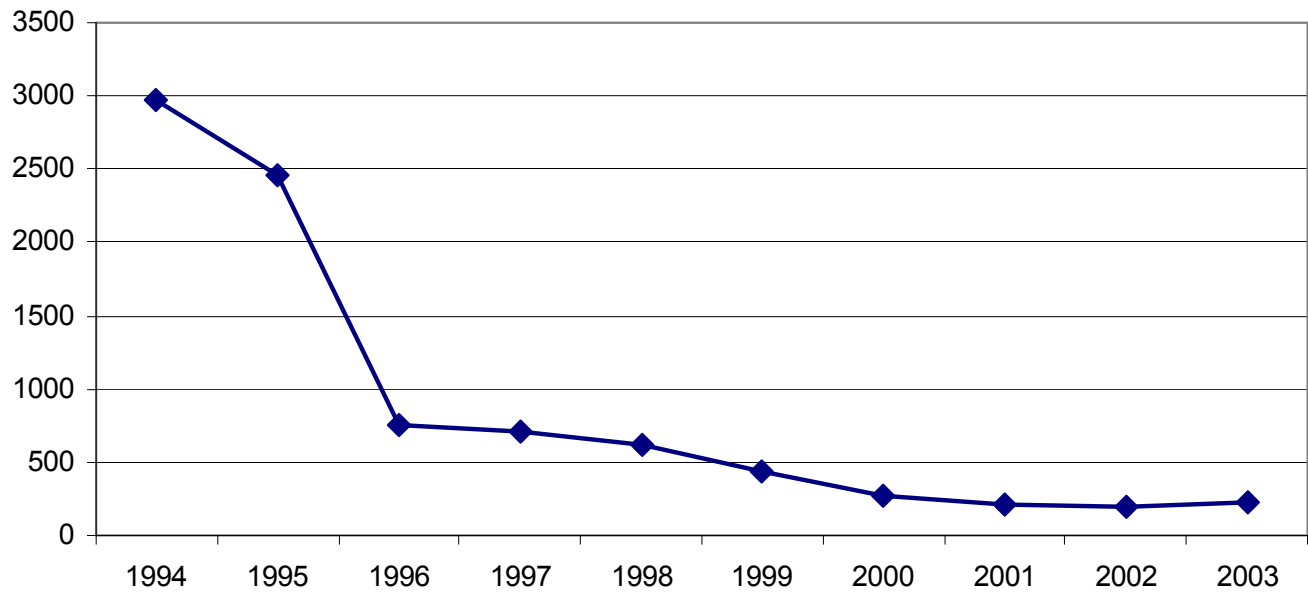
Number of subscribers (in thousands)



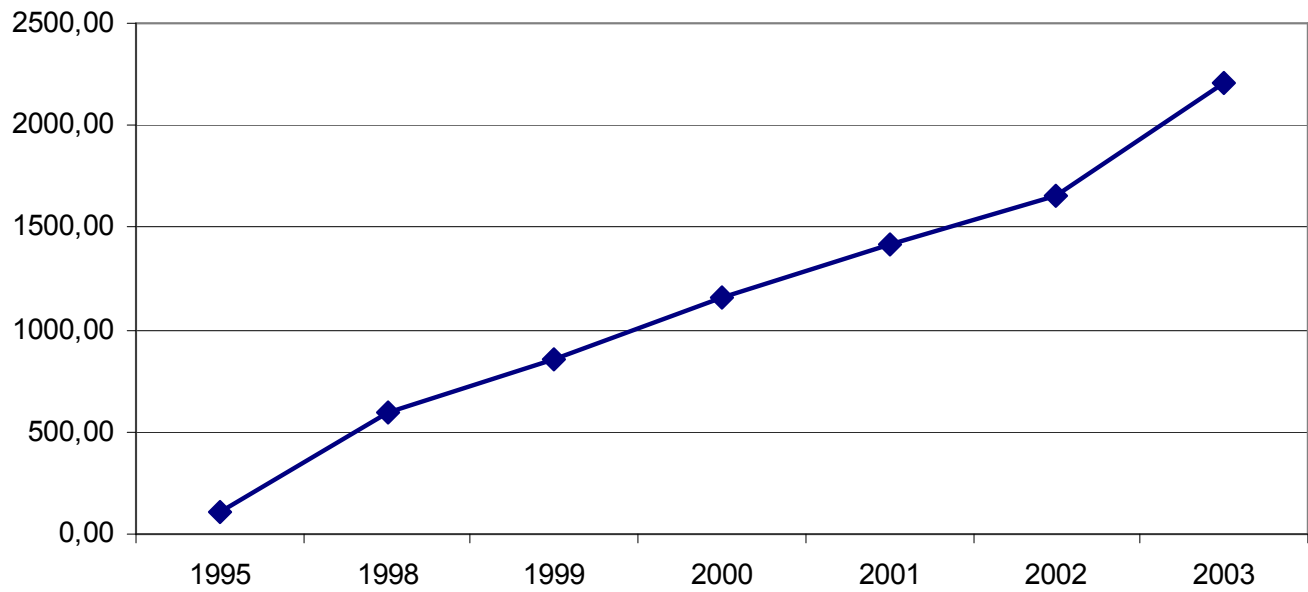
# Mobiles vs. Landlines



**Yearly revenues per subscriber in Czech Republic in USD**



**Mobile telecommunication revenue in Czech Republic  
in mil. USD**



<b>Country</b>	<b>1994</b>	<b>1999</b>	<b>2003</b>	<b>Country</b>	<b>1994</b>	<b>1999</b>	<b>2003</b>
<b>Australia</b>	<b>881</b>	<b>594</b>	<b>429</b>	<b>Luxembourg</b>	<b>960</b>	<b>387</b>	<b>359</b>
<b>Austria</b>	<b>..</b>	<b>515</b>	<b>646</b>	<b>Mexico</b>	<b>1570</b>	<b>199</b>	<b>197</b>
<b>Belgium</b>	<b>1932</b>	<b>502</b>	<b>460</b>	<b>Netherlands</b>	<b>1543</b>	<b>380</b>	<b>463</b>
<b>Canada</b>	<b>703</b>	<b>466</b>	<b>432</b>	<b>New Zealand</b>	<b>412</b>	<b>312</b>	<b>332</b>
<b>Czech Republic</b>	<b>2965</b>	<b>437</b>	<b>227</b>	<b>Norway</b>	<b>488</b>	<b>277</b>	<b>381</b>
<b>Denmark</b>	<b>462</b>	<b>378</b>	<b>371</b>	<b>Poland</b>	<b>..</b>	<b>363</b>	<b>208</b>
<b>Finland</b>	<b>2995</b>	<b>485</b>	<b>533</b>	<b>Portugal</b>	<b>1176</b>	<b>332</b>	<b>395</b>
<b>France</b>	<b>875</b>	<b>310</b>	<b>358</b>	<b>Slovak Republic</b>	<b>..</b>	<b>19</b>	<b>195</b>
<b>Germany</b>	<b>1129</b>	<b>701</b>	<b>353</b>	<b>Spain</b>	<b>842</b>	<b>423</b>	<b>384</b>
<b>Greece</b>	<b>215</b>	<b>402</b>	<b>392</b>	<b>Sweden</b>	<b>407</b>	<b>299</b>	<b>285</b>
<b>Hungary</b>	<b>1021</b>	<b>477</b>	<b>254</b>	<b>Switzerland</b>	<b>1007</b>	<b>546</b>	<b>535</b>
<b>Iceland</b>	<b>428</b>	<b>267</b>	<b>402</b>	<b>Turkey</b>	<b>353</b>	<b>86</b>	<b>114</b>
<b>Ireland</b>	<b>..</b>	<b>486</b>	<b>458</b>	<b>United Kingdom</b>	<b>0</b>	<b>328</b>	<b>319</b>
<b>Italy</b>	<b>886</b>	<b>292</b>	<b>331</b>	<b>United States</b>	<b>630</b>	<b>583</b>	<b>554</b>
<b>Japan</b>	<b>3132</b>	<b>1056</b>	<b>932</b>	<b>OECD</b>	<b>917</b>	<b>537</b>	<b>454</b>
<b>Korea</b>	<b>1232</b>	<b>311</b>	<b>396</b>				<b>12</b>

# Market structure in CR

Network Carrier	Number of active SIM cards	ARPU	EBITDA (billions CZK)	Coverage of population
Telef. O <sub>2</sub>	4 770 000	533 (n/a)	10,4 (-2%)	99 %
Vodafone	2 263 000	679 (+3)	-0,46 (-23,4%)	98,4 %
T-Mobile	4 734 000	483 (-4)	9,67 (+8,3%)	99 %

Active SIM cards total: 11 767 000

Population est.: 10 235 000

Penetration: 115 %

As to 30th June 2006

# Telefónica O<sub>2</sub>

- Wholly owned by Český Telecom
- Český Telecom now owned by Telefonica S.A.
- 1991 NMT
- 1996 GSM
- 2000 March HSCSD, October GPRS
- 2004 CDMA

# Rebranding of Eurotel

First name was Česká správa Pošt a telekomunikací  
(until 1992)

In 1992 was established new company called SPT Telecom (monopoly in landlines) and Eurotel (monopoly in mobiles), the marketing costs were estimated to be more than 10 mil Kč

In 2000 was SPT Telecom renamed to Český Telecom, the costs are believed to be about 250 mil Kč

The last change was of both names (Český Telecom and Eurotel) to Telefónica O2 Czech Republic, the rebranding costs are estimated to be cca 500 mil Kč

# T-Mobile

- 1996 Company named Radiomobil obtained GSM license
- 1996 Launched network called Paegas  
= first ever competition on Czech telecommunication market
- 2002 Renamed to T-Mobile as approx. 60,6 % bought by T-Mobile, wholly owned by Deutsche Telecom AG



# Rebranding of Paegas

Company Radiomobil had been operating network called Paegas

In 2002 T-mobile undertook a 3 months marketing campaign valued at 500 – 600 mil Kč

# Vodafone

- License since October 1999, network launched in 2000
- 2001 and 2002 World Communication Award as World's best mobile network carrier
- 2005 Bought by Vodafone Group Plc.

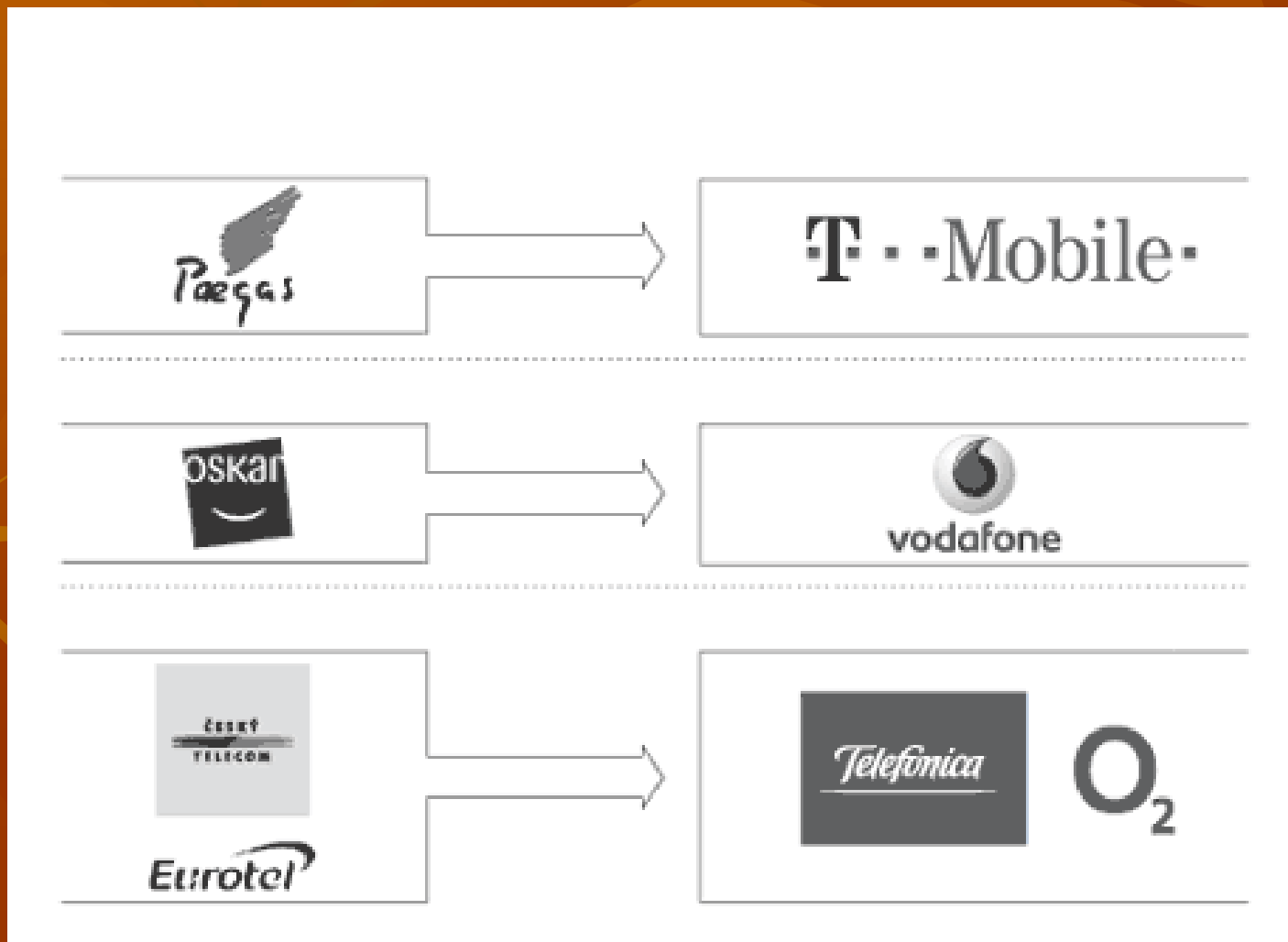
# Rebranding of Oskar

As it was bought by Vodafone in 2005, it changed its name to Oskar Vodafone first and 1. 2. 2006 to Vodafone finally

The marketing campaign started in July 2005 and haven't finished until February 2006

Approximately 500 mil Kč was spent

# How they were all changing



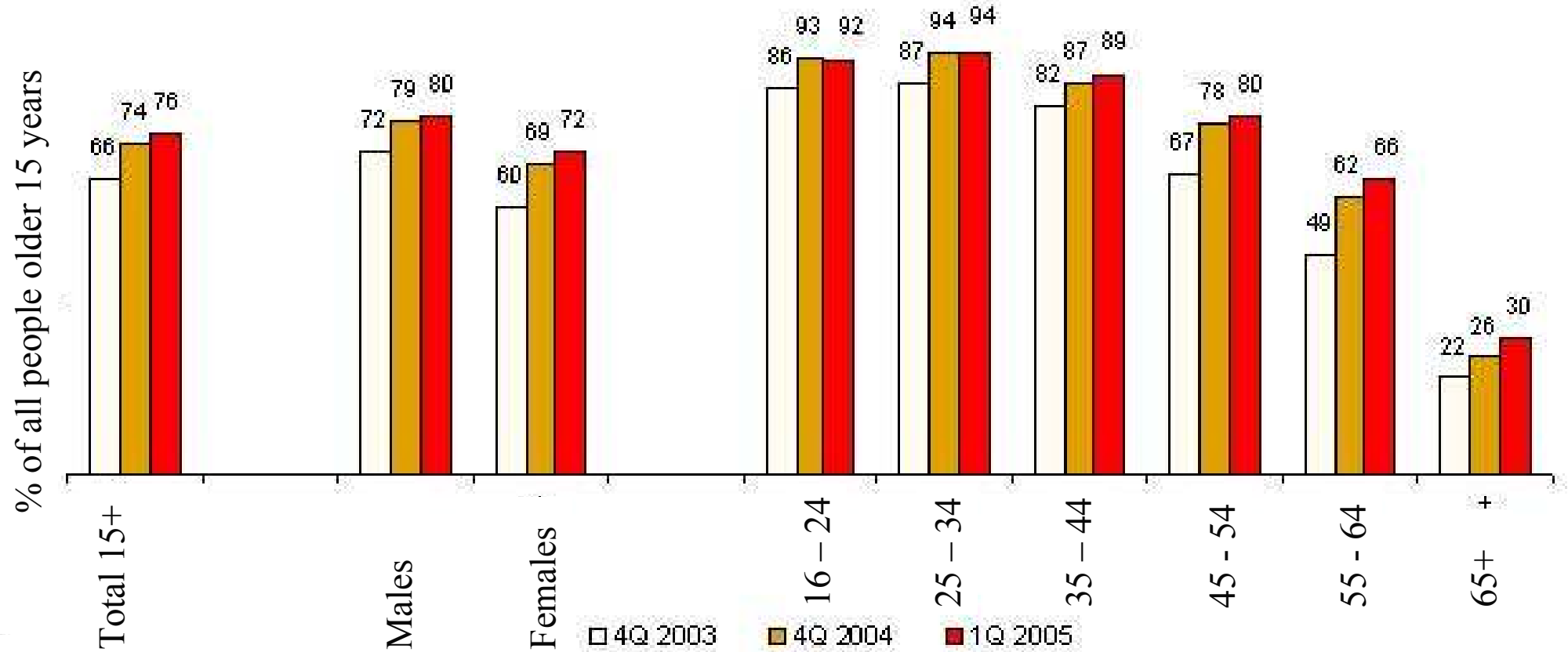
# Technologies

Carrier	GSM	HSCSD	GPRS	EDGE	CDMA	UMTS
Telefonica O <sub>2</sub>	Yes	Yes	Yes	No	Yes	Yes
Vodafone	Yes	No	Yes	Yes	No	Not operating
T-Mobile	Yes	No	Yes	Yes	No	Yes
Speed (kbps)	14,4	57,6	171,2	384	2048	1920

# Competition nowadays at Czech mobile telecommunication market is strong because:

- The real penetration is about 85%  
= providers fight for the rest
- The share of prepaid customers is high  
= providers want post-paid
- 3G is launching  
= data services is a way to raise ARPU

# Real penetration



# How to get new customers while the real penetration is 85 %

- In some countries (Germany) start up of virtual providers focused on special segments (elders, low spending customers)
- Another way is a deal with resellers (Australia)
- The fastest and cheapest is to make new plans/tariffs. Its side effect is also that the prices are hard to compare, so the customer is not so price sensitive



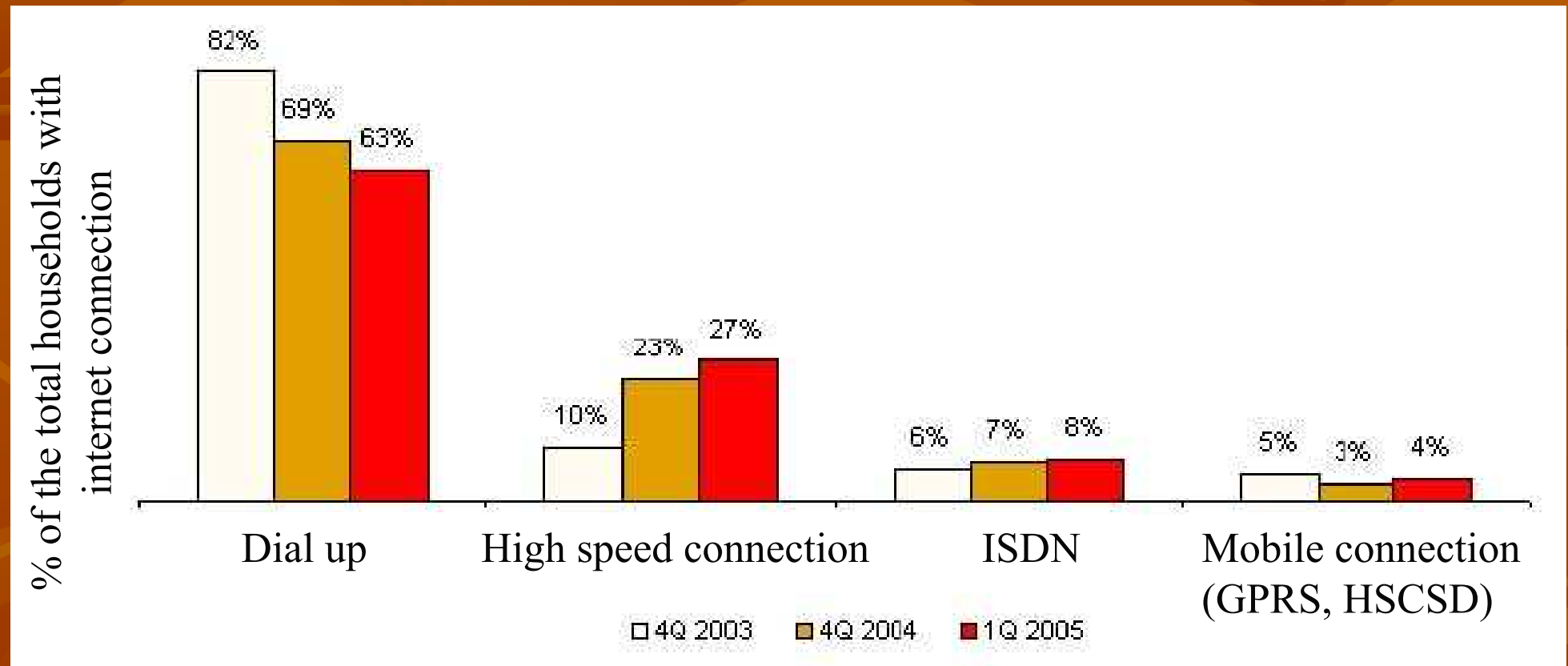
# Prepaid vs. Postpaid

- Postpaid customers are much more profitable
  - Vodafone has about 50% customers on plans (= postpaid) and the ARPU of them is 966 CZK monthly. Compare to ARPU of prepaid customer 342 CZK
- Customers on plan are more likely to be loyal
  - That is important for full portability of phone numbers was just introduced

# Data services

- Recent way, how to squeeze out more money of mobile network users
- Faster data transmitting enables to provide new services
- Lack broadband internet connection in CR

# Means of internet connection in ČR



# Mobile commerce in CR

Used by 10 % of Czech mobile owners

Until 2005 limited to less sophisticated forms

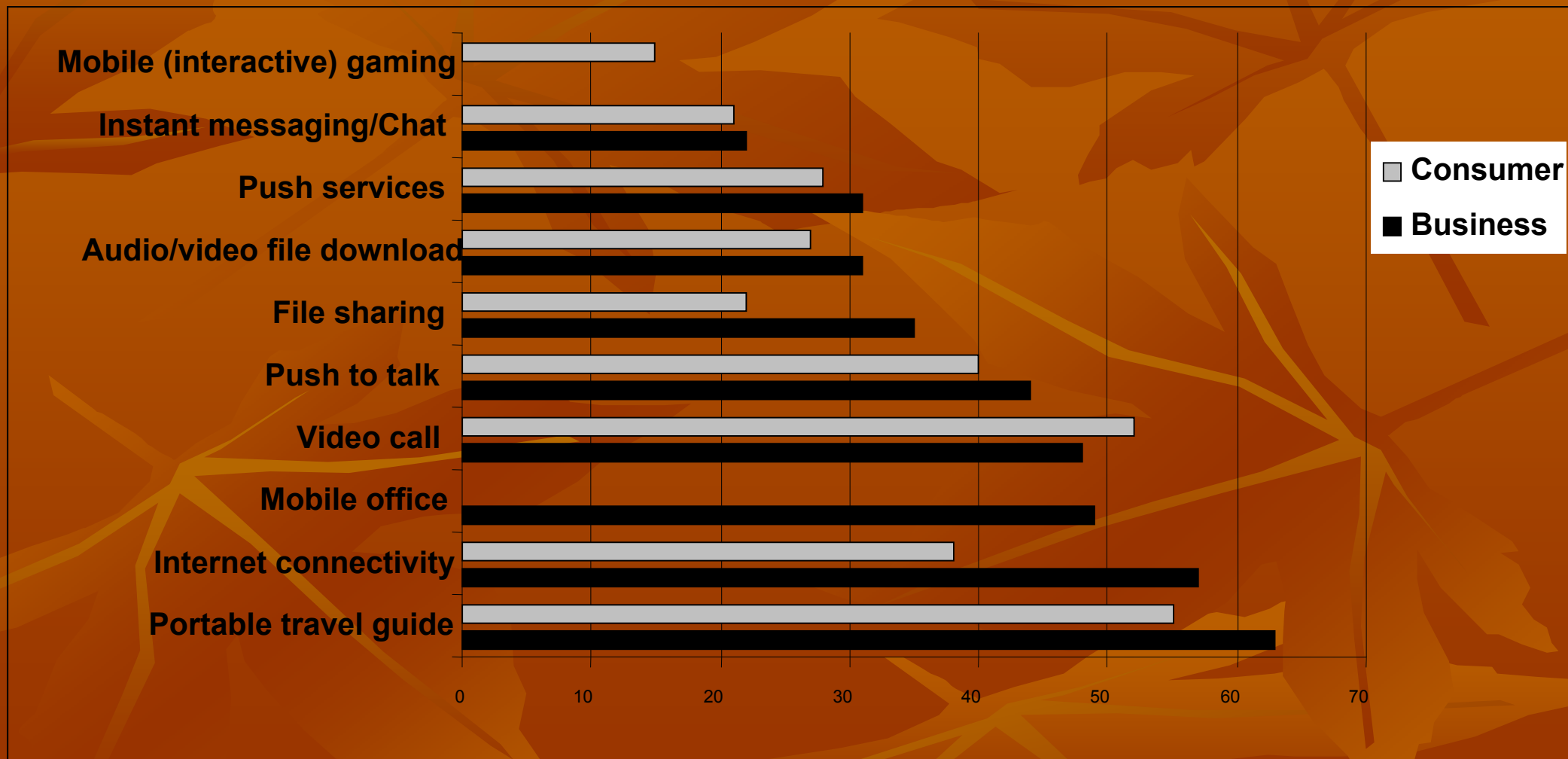
200 mil CZK in 2003

(inc.42 mil CZK spent on mobile games in 2003)

500 mil CZK est. in 2004

1 bil CZK est. in 2005

# Expected services in 3G networks (Milvard Brown survey, ČR 2005)



People inquired claimed they would be spending approx. 480 CZK monthly  
(for these new services)

# What services do you plan to use in next 12 months?

	Asia Pacific (%)	Europe (%)	North America (%)	South America (%)
Games	49	15	11	30
Ring tones	73	20	27	25
Music	55	15	13	28
News	31	15	15	23
Sports clips	29	12	10	13
Multimedia images (images, screen savers)	56	16	13	13
Video clips or movie previews	25	7	7	10
Full feature films	11	8	3	8

# What are the most important factors for you, when you are downloading content to your mobile phone?

	Asia Pacific (%)	Europe (%)	North America (%)	South America (%)
Ease of payment	54	39	31	64
Quick to download	58	30	30	15
Immediate/timely content delivery	46	30	23	22
Able to share content with friends	60	44	17	38
Ability to store content on the network	25	12	14	24
Ability to store content on mobile phone	38	26	11	44

# M-banking

Association for mobile payments (all three providers and 5 biggest banks in ČR)

M-payment by T-mobile

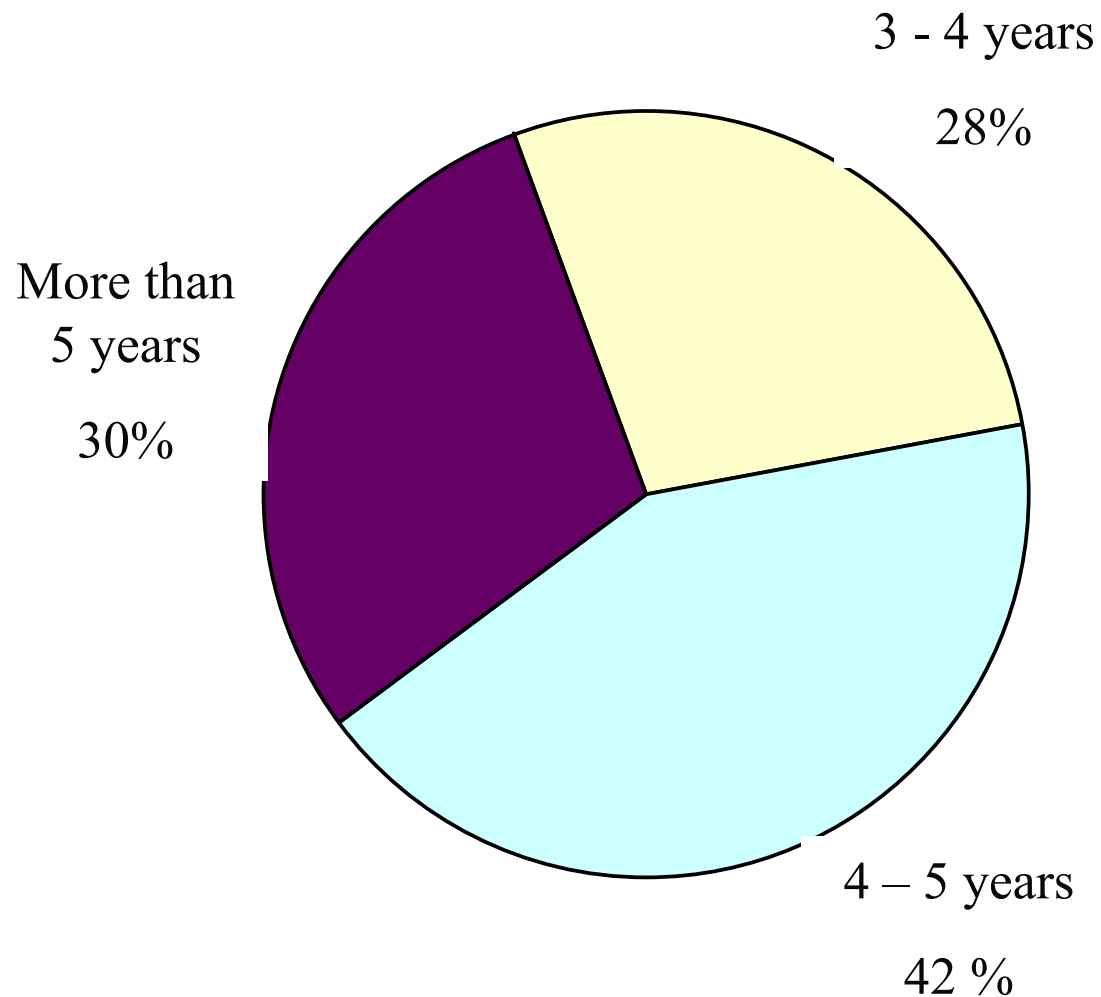
Maintaining of bank accounts via mobiles



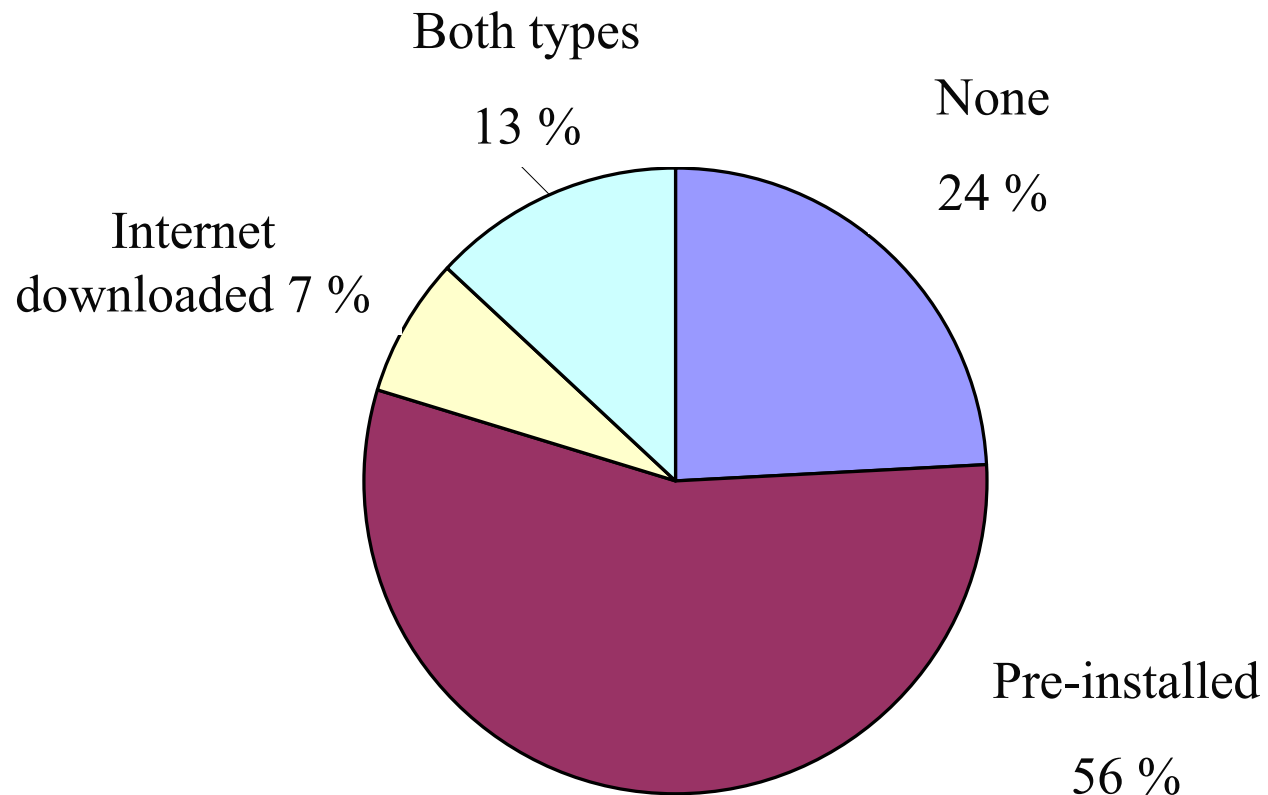
# Favourite content today

Real tones:		Welcoming tones:	
Robbie Williams	Angels	Maroon 5	This love
Madonna	Hang up	Vyvolení	Znělka
Anastasia	Left outside alone	Chinaski	Tabáček
Vyvolení	Znělka	Přátelé zeleného údolí	
Polyphonic ringtones:		Java games:	
Chinaski	Tabáček	Asphalt	
Robbie Williams	Tripping	Yetisport 1 DC	
Europe	The final countdown	2005 Real Football	
Eamon	F... it	The Lord of The Rings	

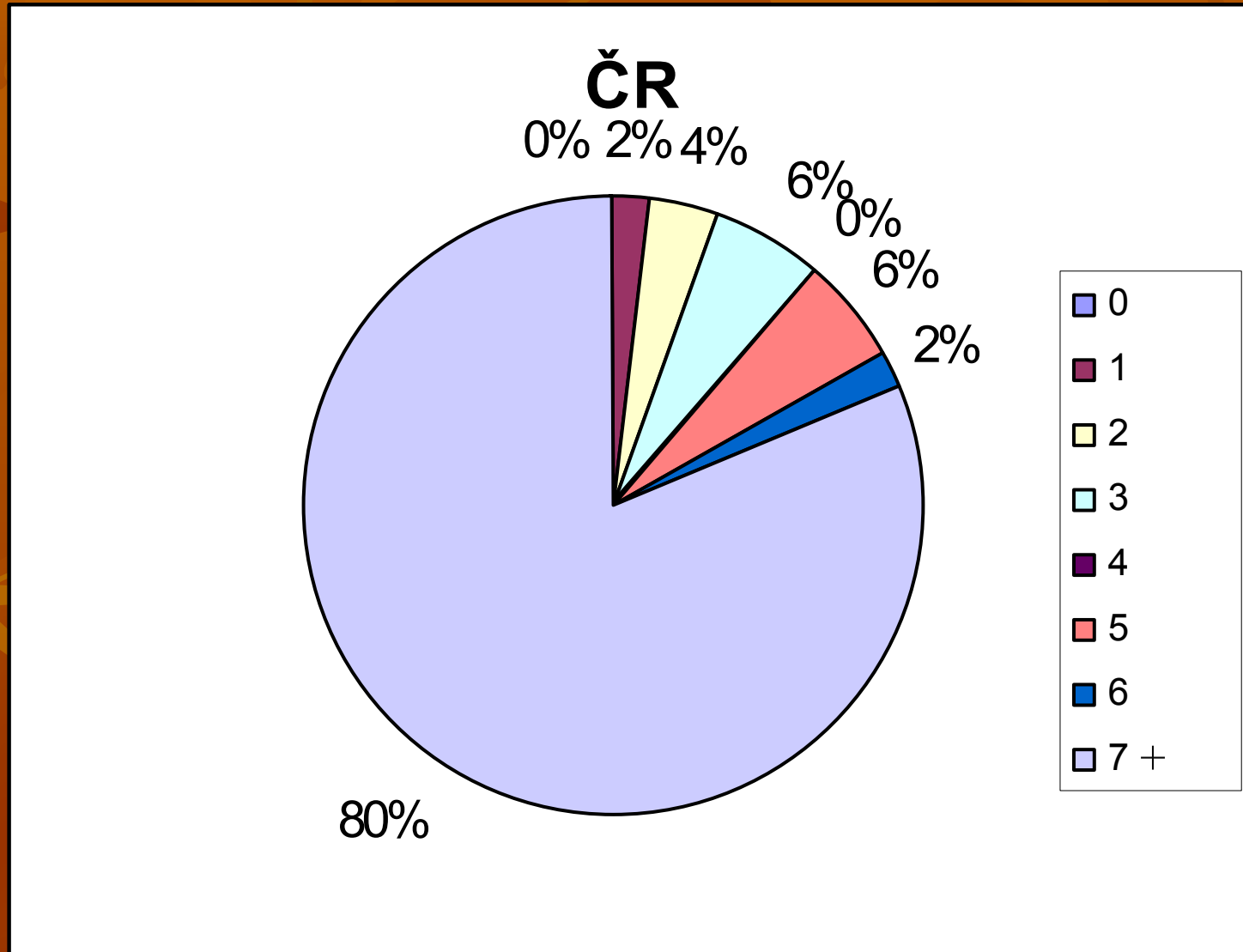
# How long have you been using a cell phone? (Survey among Czech students, 2005)



# Do you play games on mobile phone? (Survey among Czech students, 2005)



# How often do you send SMS (per week)? (Survey among Czech students, 2005)



# New content (offered since 12/2005 in ČR)

- Big brother type of entertainment
- TV news
- Traffic cameras
- Music downloads
- Online games



**Thank you for your attention**