



June 7 & 8, 2006
National Trade Centre
Toronto, Canada



Opportunities and Challenges in Mobile Media and Content



Lloyd Switzer
VP/GM Strategy and Technology
inCode Canada

inCode has built a distinctive competence in telecom and wireless

Since 1998 inCode Wireless' advisors have focused on the telecom and wireless world, delivering innovative and effective solutions at the intersection of business and technology.

inCode Overview



- Founded in 1998
- Headquartered in San Diego, California
- Offices in Atlanta, Stockholm, Paris, Brussels, Guatemala, Calgary.
- Backed by Sequoia Capital, inOvate and Focus Ventures

People

- Over 450 experienced professionals with average experience of 8 to 10 years
- Leading business and technology consultants, program managers and integration specialists
- Experience worldwide at major operators, handset manufacturers, consulting firms, and vendors
- Diversity of nationalities, international experience and languages
- Frequently sought out as an expert wireless industry commentator.

Sample Clients



Wireless Technology Lab – One Step Ahead



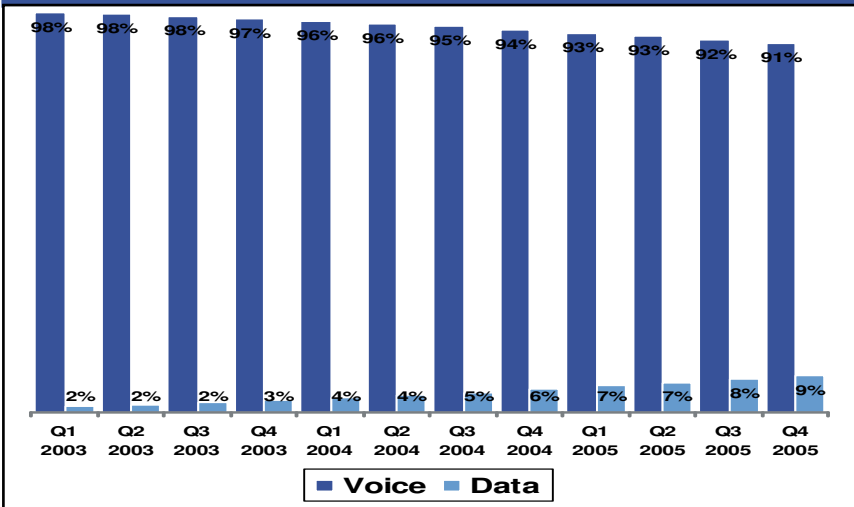
- “Smallest 3G wireless carrier in the world”
- Advisory council from leading US and International wireless carriers
- Provide independent testing, integration and interoperability of next generation technologies and applications
- GPRS/UTMS/HSPA, Wireless Broadband, WiMax
- Push-To-Talk, MMS, LBS, OSS/BSS, IMS and Enterprise solutions

Agenda

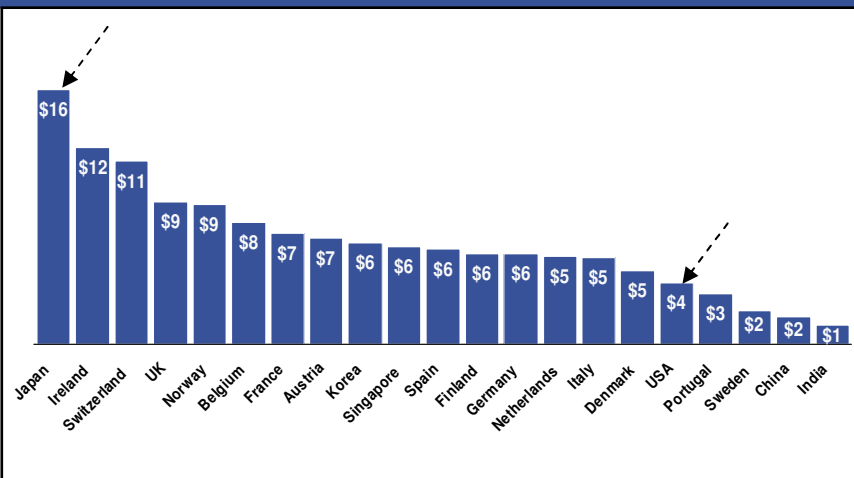
- **Media and Content Industry Overview**
- **Business Models**
- **Lessons Learned**

Voice remains the dominant service but mobile data will drive growth

Wireless Voice & Data ARPU Shares, 2003 to 2005



Global Monthly Data ARPU Snapshot (Q1 2005)



Source: Merrill Lynch Global Wireless Matrix, 2005, Company reports, inCode analysis

Overview & Key Market Trends

- Mobile data services are set to grow:
 - But large differences by geography in Average Revenue Per User
- Growth Drivers:
 - 3G networks
 - Mass market availability of feature-phones
 - Growing portfolio of mobile content/applications
- NTT DoCoMo (Japan) and Verizon Wireless (US) have shown that a seamless service creation ecosystem is critical to the success of mobile data services.

Slide 4

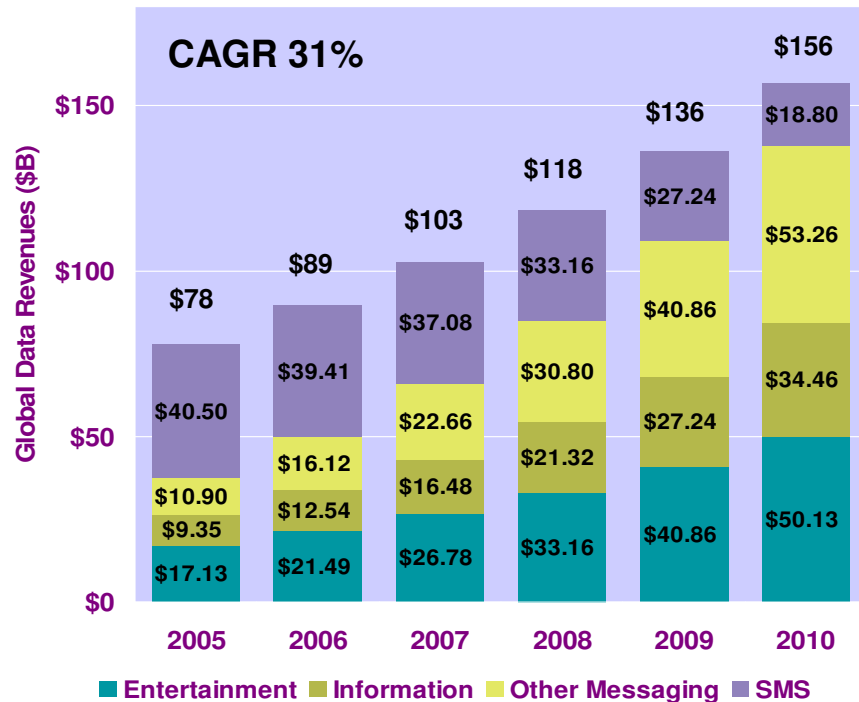
RK11

Scale this graph. Does not make any sense since it is too large/small

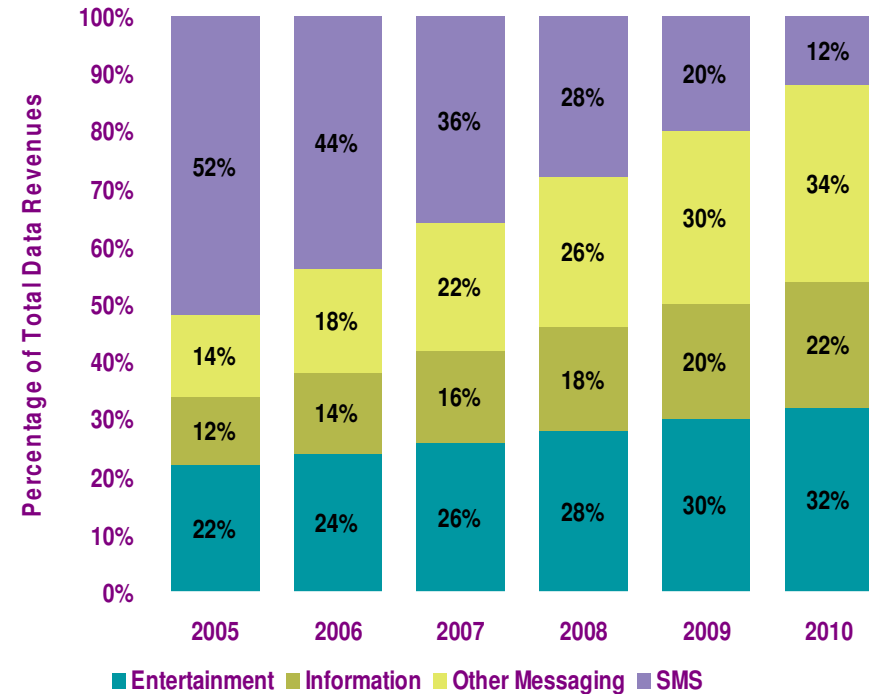
Rob Koldys, 3/13/2006

Messaging has been the largest data service - mobile content has been slow to grow

Global Data Revenue Forecast by Segment, 2005-2010 (\$M)



Percentage Share of Global Data Revenues, 2005-2010 (\$M)



- High penetration rates, saturating MOUs is putting downward pressure on voice
- New data revenue is already displacing voice revenue in many markets
- This is sparking innovation in mobile content and media

Despite the hype, demand for mobile video has been slow to build...

Mobile Video and Browsing are Slowly Emerging

Over 60% of users show little interest in Mobile Video Services¹.

By 2009, mobile video services will account for less than 15% of total wireless data revenues².

Decreased interest in Photo/Video Messaging over the past year:

- Interoperability issues
- Waning customer demand

Top Challenges for Video:

- Capability and cost of handsets
- Developing viable business models for video distribution, which would include content right management
- Interoperability and roaming issues for the service
- Still competing standards across the value chain (e.g. mobile TV broadcast, DRM)

Sources: ¹ Strategy Analytics Report ² in-Stat/MDR

Mobile Content Transactions, 2005

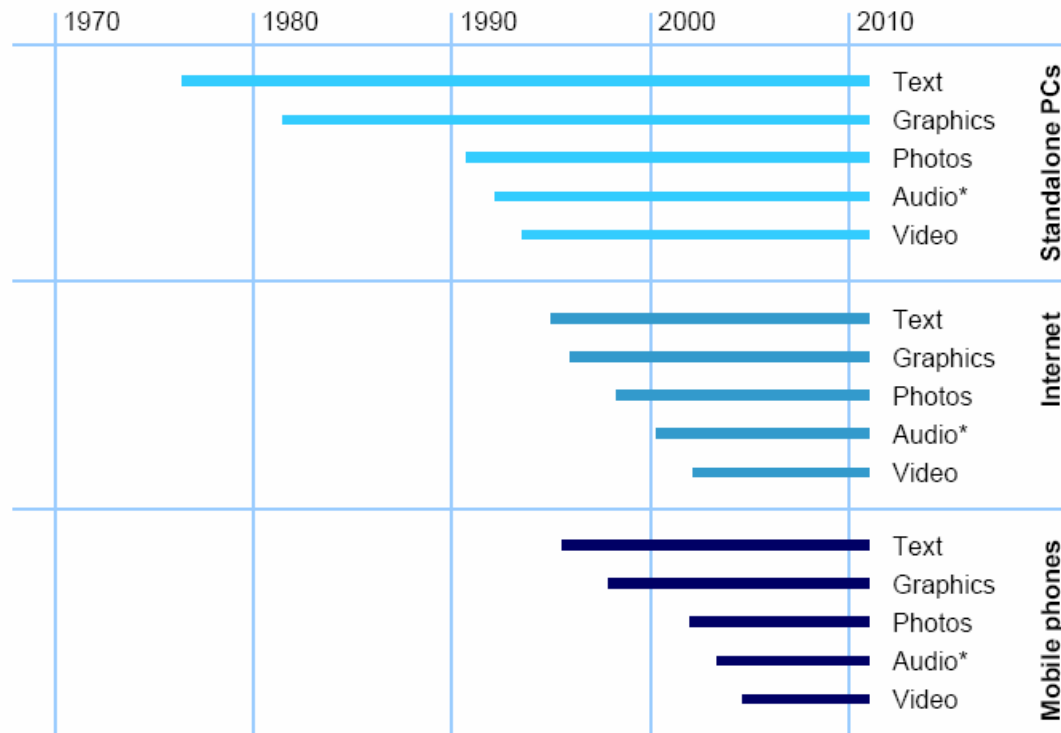
RINGTONES	56%
MOBILE GAMES	20%
GRAPHICS	15%
VIDEO	2%
OTHER	7%

Source: QPass, 2005

But if history is a guide, mobile video is coming

Video services are traditionally the last service to be provided. The question is when...

Figure 1 Consumer digital media technologies reach video last of all

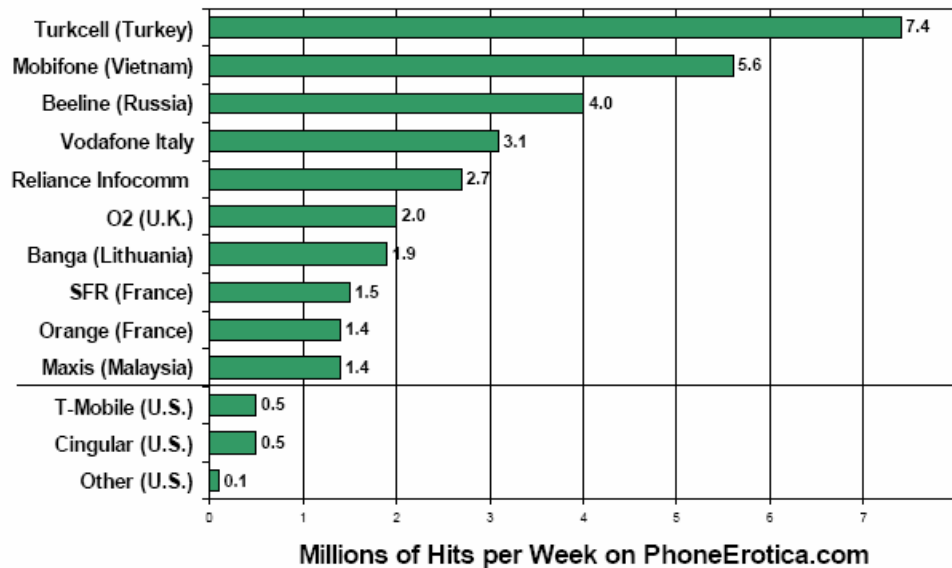


*Indicates presence of the capabilities in the general consumer market
Varies by region - for example, mobile photos, audio and video emerged earlier in Japan
* Not including telephony, which is a special case*

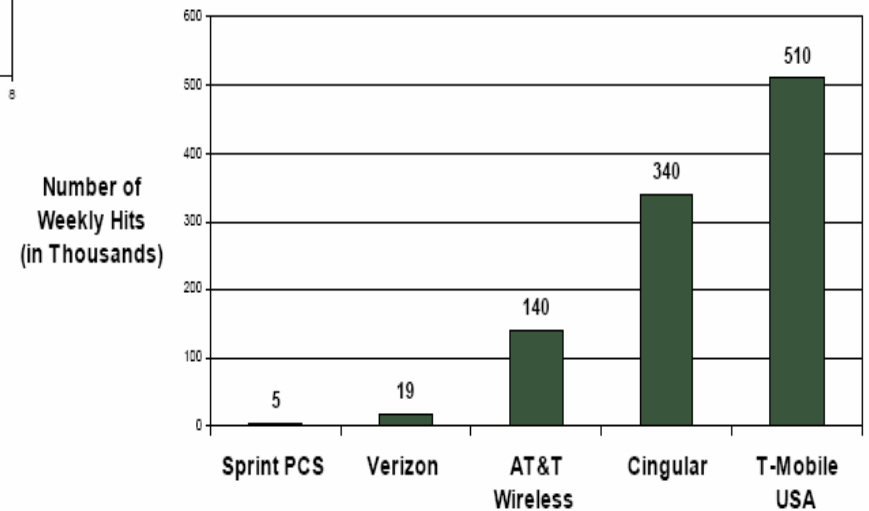
Source: Ovum

And don't forget the content that drove early successful business models on the Internet...

Mobile adult content demand

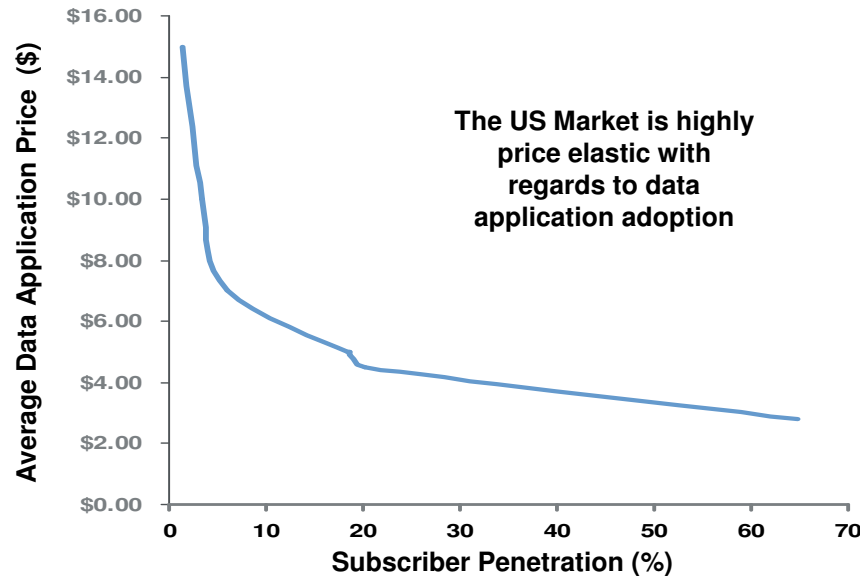


Weekly Hits (Pictures, Videos, WAP Pages) on PhoneErotica.com

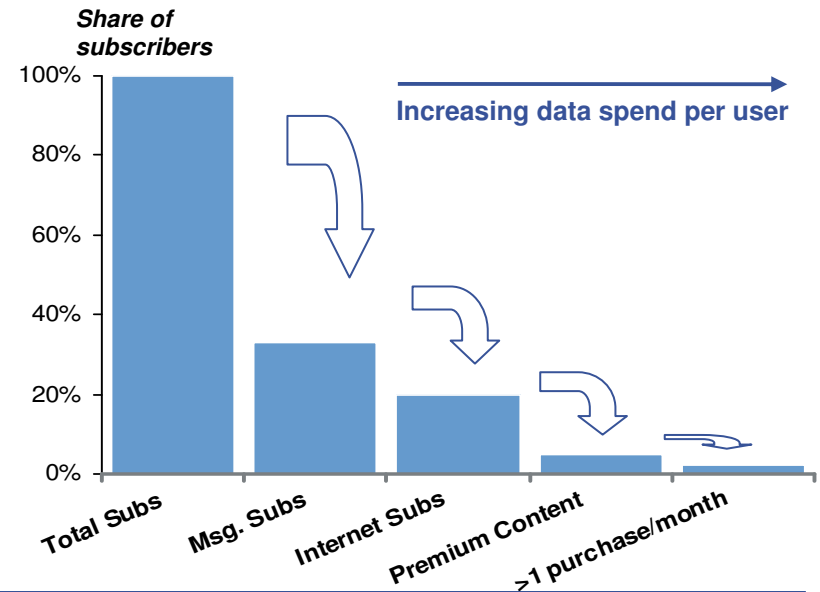


Sources:
 Portio Research, Mobile data Deployment Strategies 2004-2010
 Yankee Group, Wireless Adult Content

Unsurprisingly, mobile content is highly price sensitive



Source: M:Metrics, Inc., IDC, Yankee Group, inCode Analysis



Source: inCode Analysis

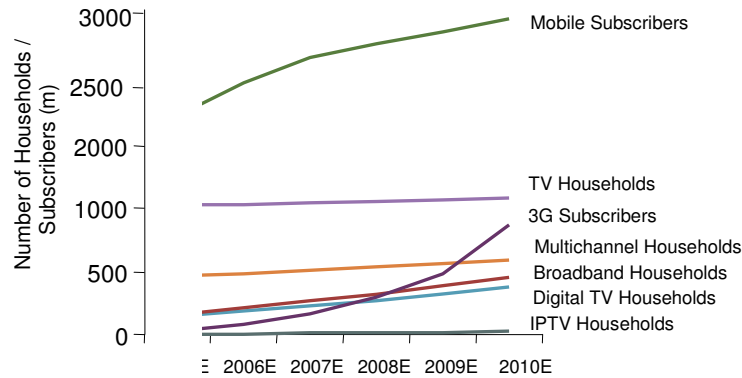
- The average selling price has a direct impact on the overall market potential & adoption of mobile content services in the US
- Branded & enhanced, multimedia services are expensive to deliver (DRM issues) & require expensive handsets (\$400+ range)

Premium pricing models limit the addressable market yet lower pricing creates a profitability challenge.

Dramatic changes are happening across the entire mobile content and media ecosystem

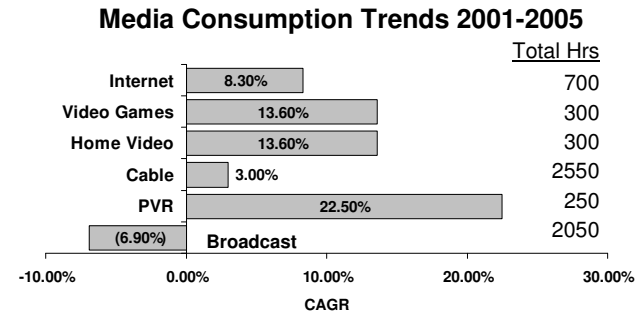
Access

More ways to access content



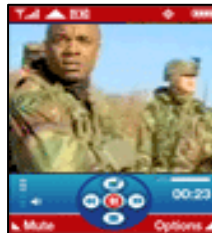
Customer Consumption Patterns

Consumers are consuming more and varied media



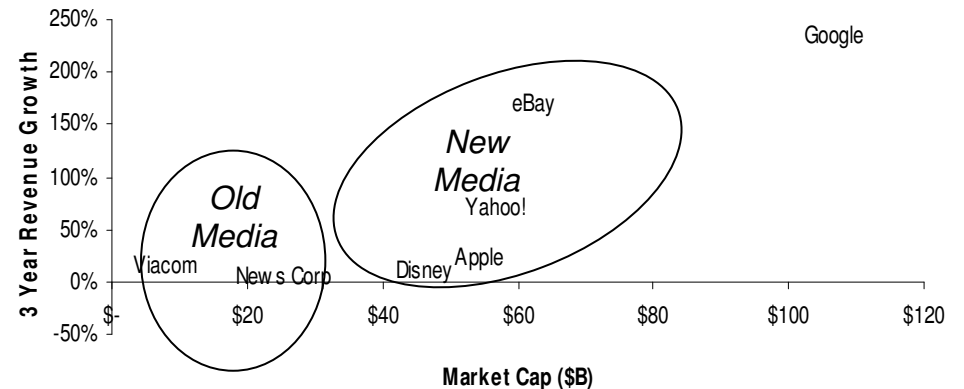
Competition

Traditional and emerging competitors are experimenting



Capital Markets

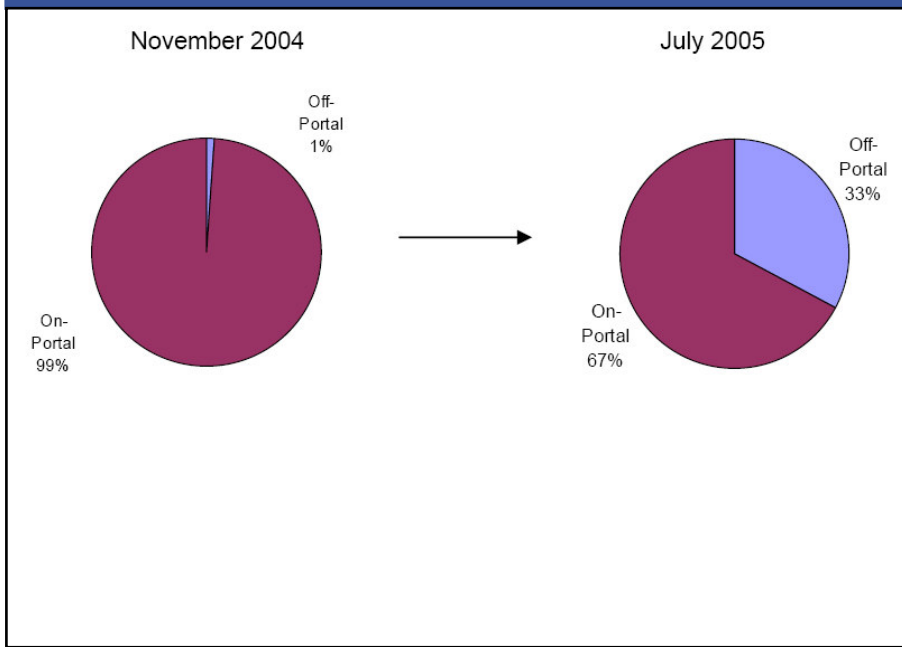
Deep-pocketed entrants in this market



Altering long-standing industry arrangements

The source of content is changing dramatically with the growth of 'Off-Portal' sites

Off-Portal vs. On-Portal Content Access, 2003 to 2005



Disruptive Trends in Mobile Data Service Environment

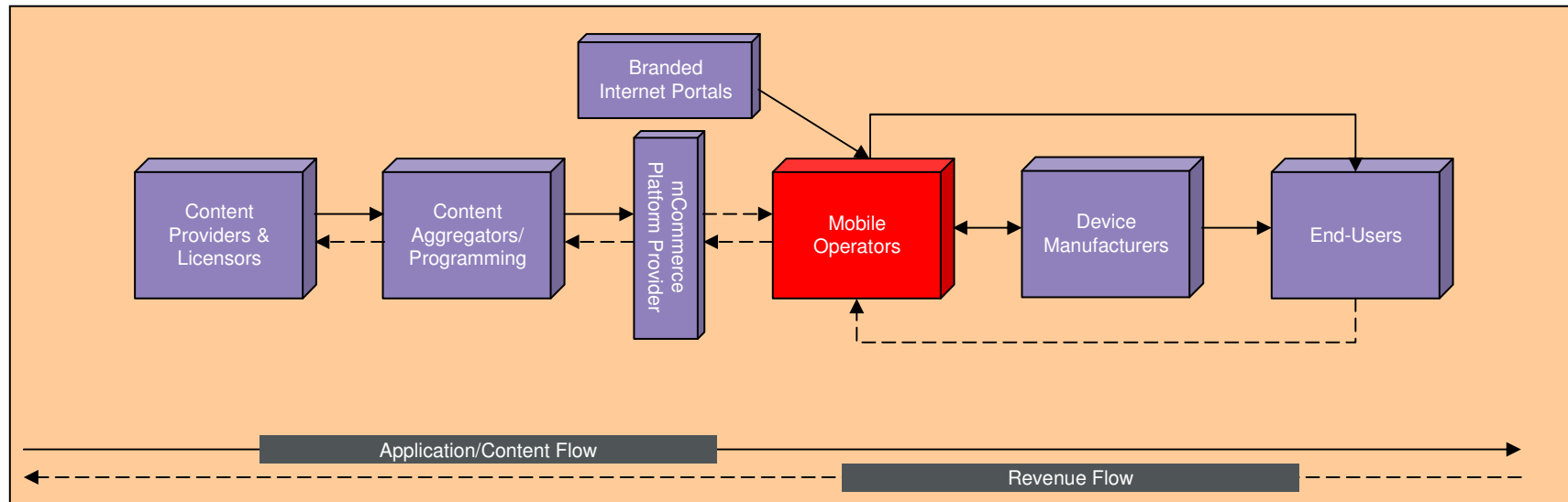
- **Advent of the Internet Portals like Yahoo!, Microsoft and Google**
- **Off-portal content has hit 70% of mobile content revenue in Europe**
- **Mobile carriers must adapt to be a “dumb bit-pipe” or a smart “Bit-pipe”**
- **Realignment of the Value Chain:** With some of the bargaining power being distributed along the value chain, every player is attempting to alter partnerships and revenue sharing agreements.

Source: QPass, 2005

Agenda

- **Media and Content Industry Overview**
- **Business Models**
- **Lessons Learned**

Today, the flow of content & revenue in the mobile data value chain is linear, with the Mobile Operator at the center of this ecosystem



Content Development Dynamics

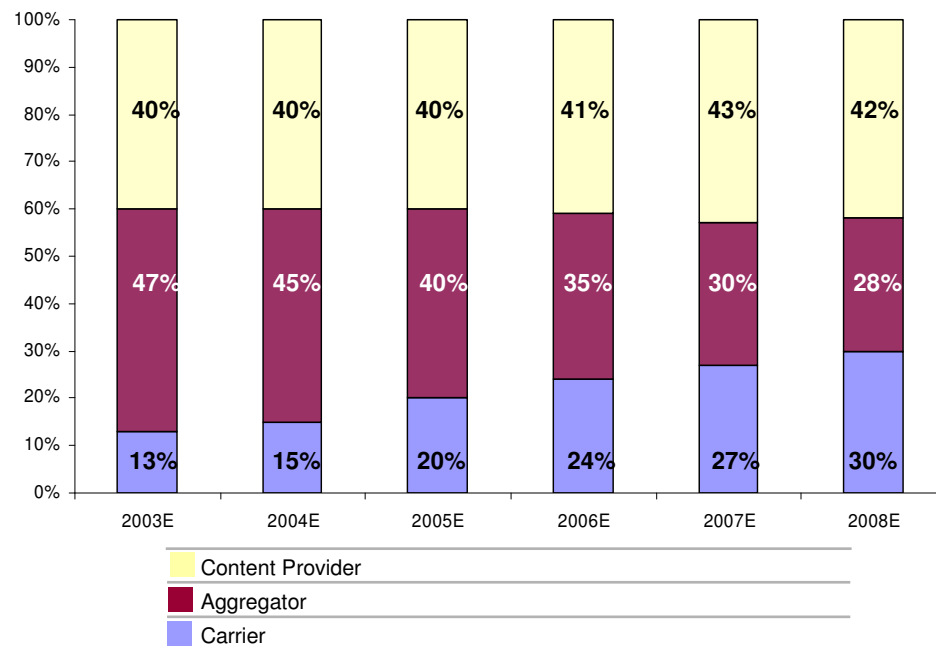
- Revenue share:
 - Content Producer – 33%
 - Content Aggregator/Programmer - 33%
 - Content Distributor (Carriers) – 33%
- Distribution conflict: Content producers and aggregators want to bypass the carriers

Mobile Operator Dynamics

- Core value from carrier: Aggregating subscribers
- Challenges: Mobile operator act as content gate keepers and not great content merchandisers
- Branded portals and branded content producers are driving hard around the carriers

Content producers will continue to garner the largest cut of wireless data revenues but the aggregator share is being squeezed.

Share of End-User Spending on Mobile Content



Aggregator's share likely to decline over time

- As content becomes richer and more complex, content providers will demand an increasing percentage of the revenues
- Similarly, wireless carriers will leverage customer relationship and infrastructure build to demand higher share of revenues
- Aggregators most likely to get squeezed in battle for customer spend

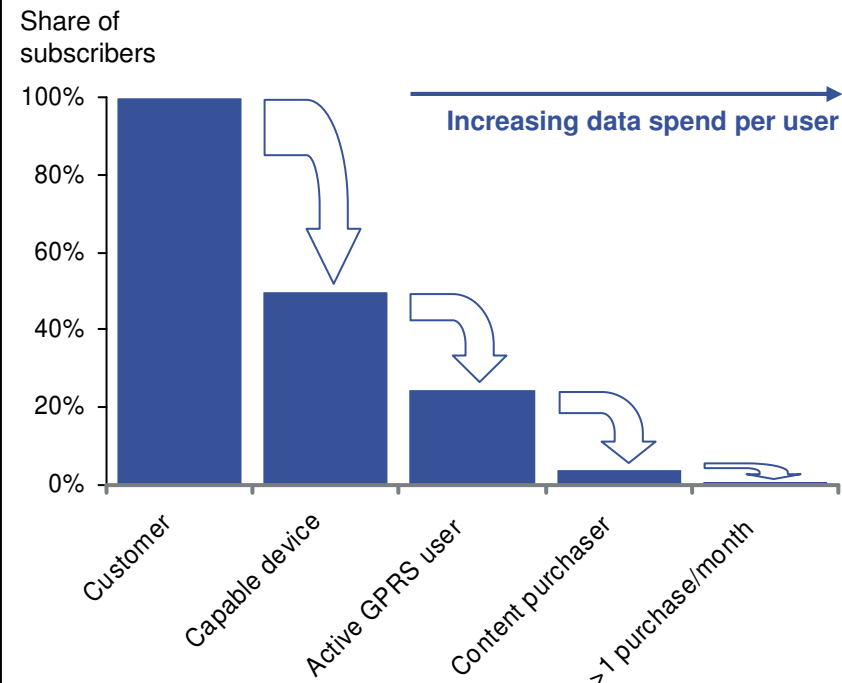
Source: Goldman Sachs Research Estimates, 2005

Agenda

- **Media and Content Industry Overview**
- **Business Models**
- **Lessons Learned**

Lesson: It is not about finding the killer app or content – all elements of the offering must work together

Demand-side challenge for Data Service Adoption



Source: inCode estimate for European markets, 2H-2005

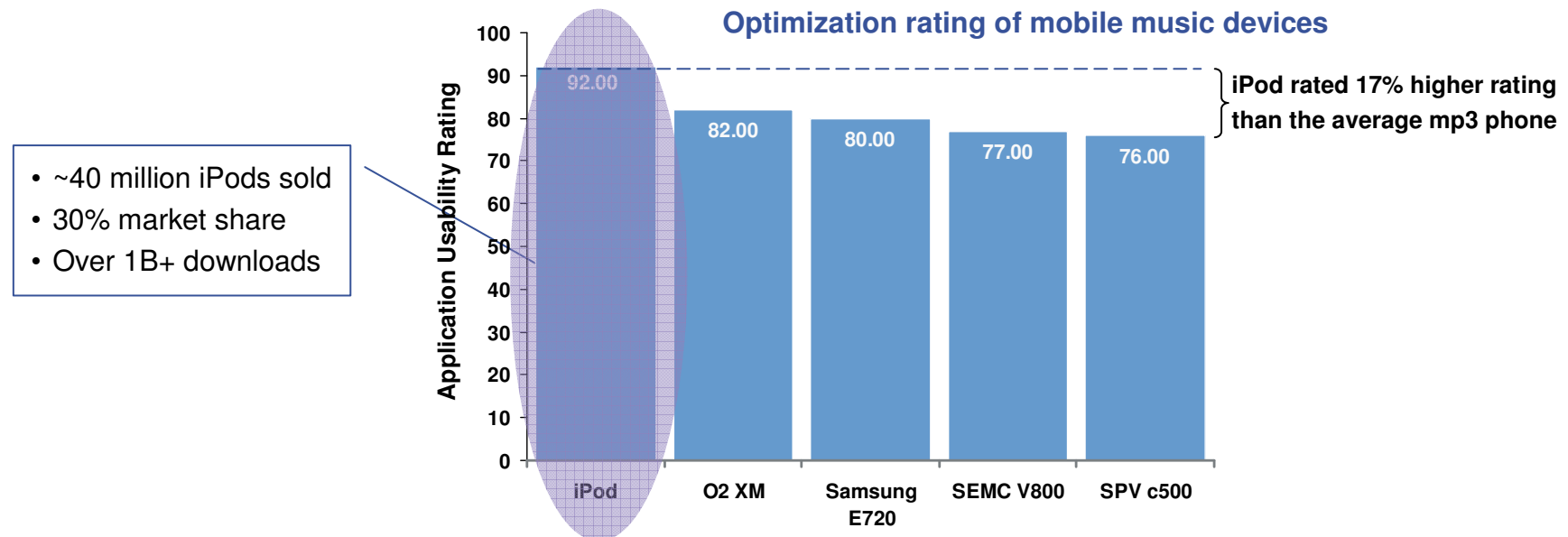
Global Monthly Data ARPU Snapshot (Q1 2005)

- Operators like Vodafone and O2 have invested enormous amounts of money to get their content and portal offerings right. Still they show limited content ARPU.
- Operational aspects of content, portals, and messaging may hold the answer:
 - Offer the right content in the right way.
 - Teach users to use it.

BOTTOM LINE!

- When services and content already paid for is not accessible or doesn't meet expectations you will see high customer service costs and churn
- Operational excellence and a compelling end-user experience are critical to catapult non-messaging data revenues above the low developed-market average % of ARPU

Lesson: Lack of optimization in delivering mobile content services has hindered service adoption and user experience



Source: Strategy Analytics, The Leading Question

- Success of Apple's 'iPod' is due to a simple and compelling end user experience – from content acquisition to usage across multiple media
- NTT DoCoMo's 'iMode' service has been successful due to their ability to create value within a seamless and exhaustive content ecosystem

Success of mobile content depends on coupling networks, devices and applications / content across an extensive ecosystem

Lesson: Recognize the different types of content consumers as each have distinct consumption patterns

Types of Content Users

- Grazers
- Porkers
- Nibblers



KSFs to drive Habitual Use

Simplify the Customer Experience

- Easy to find, easy to use, easy to learn, easy to buy
- Seamless experience between mobile deck and portal

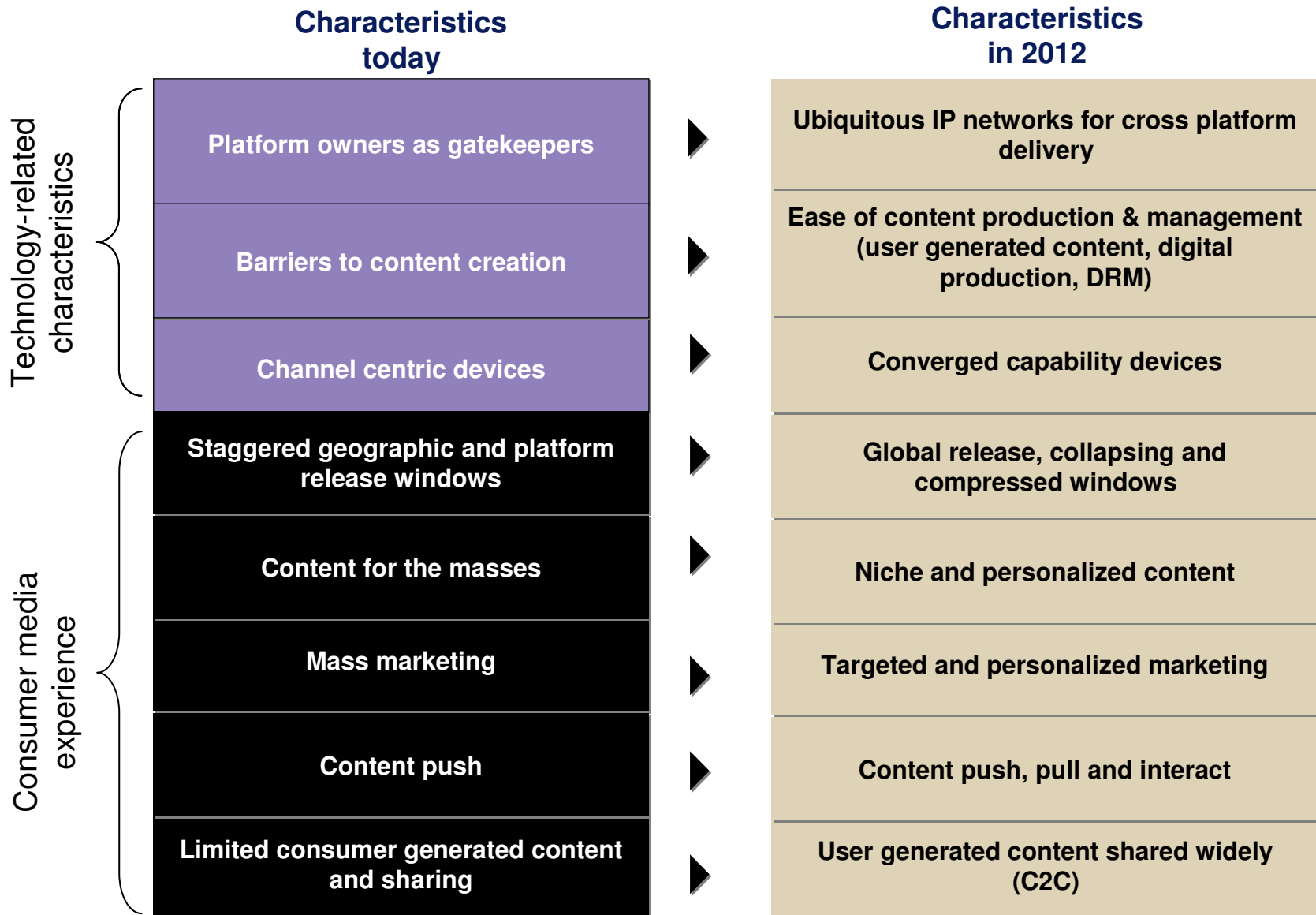
Enrich the Customer Experience

- Relevant content for specific needs:
 - Comfort – Old stand-bys easily accessible
 - Delight - Keep me coming back
- Create reasons to stay: User communities and sharing
- Put the customer in control

Promote the Mobile Experience

- Active merchandising and marketing:
 - Track and promote popular content
 - Adapt and re-merchandise content
 - Cross-promotion, affinity or loyalty programs
 - Viral marketing within communities

Summary: Content and media industry is changing in fundamental ways



Questions?

**Lloyd Switzer
inCode Wireless**