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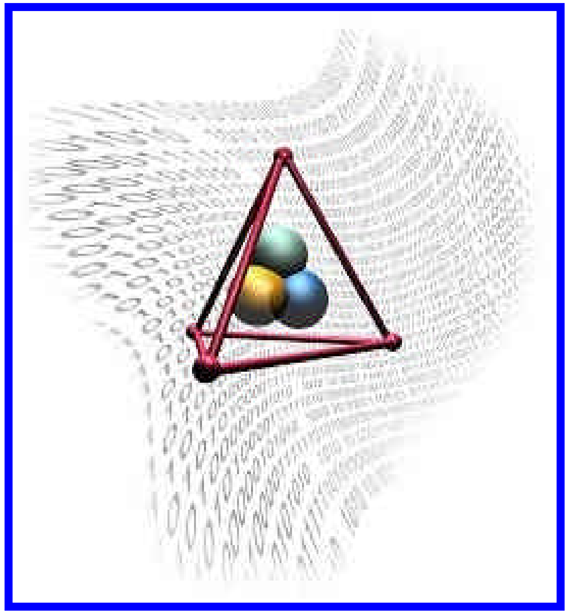

Convergence in Fixed-Wireless Applications: Requirements For Successful Business Model

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45th FITCE
Athens, Greece. August 31, 2006

Requirements for a Successful Business Model

Fixed-Wireless "Convergence" has provided end-users with different and varied means of accessing voice, video and other data applications across multiple devices and from different geographical locations.

However value-proposition is not clear, given low adoption rates.

Definition

Converged in Fixed-Wireless Applications

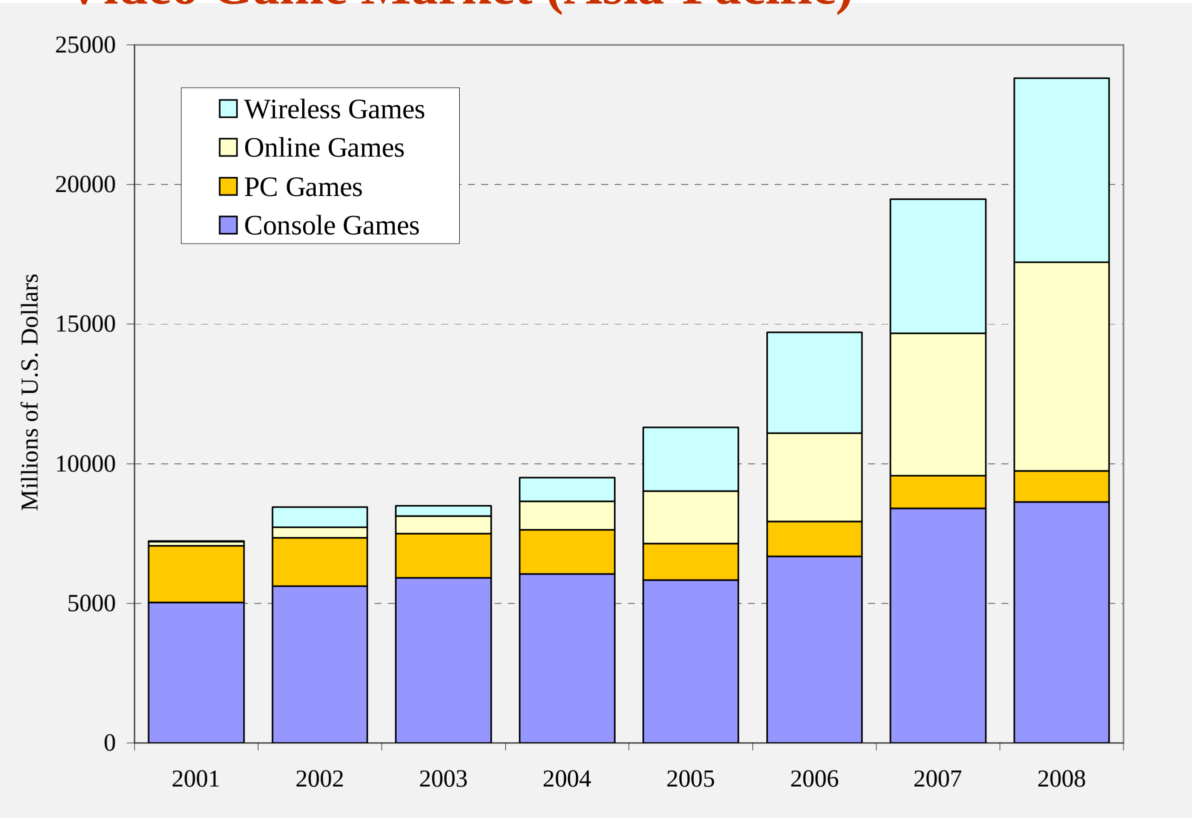
"Multimedia" applications that are accessed anytime, anywhere and through multiple access devices or single multi-function device.

Current Examples (?):

Converged Applications

Status

Video Game Market (Asia-Pacific)

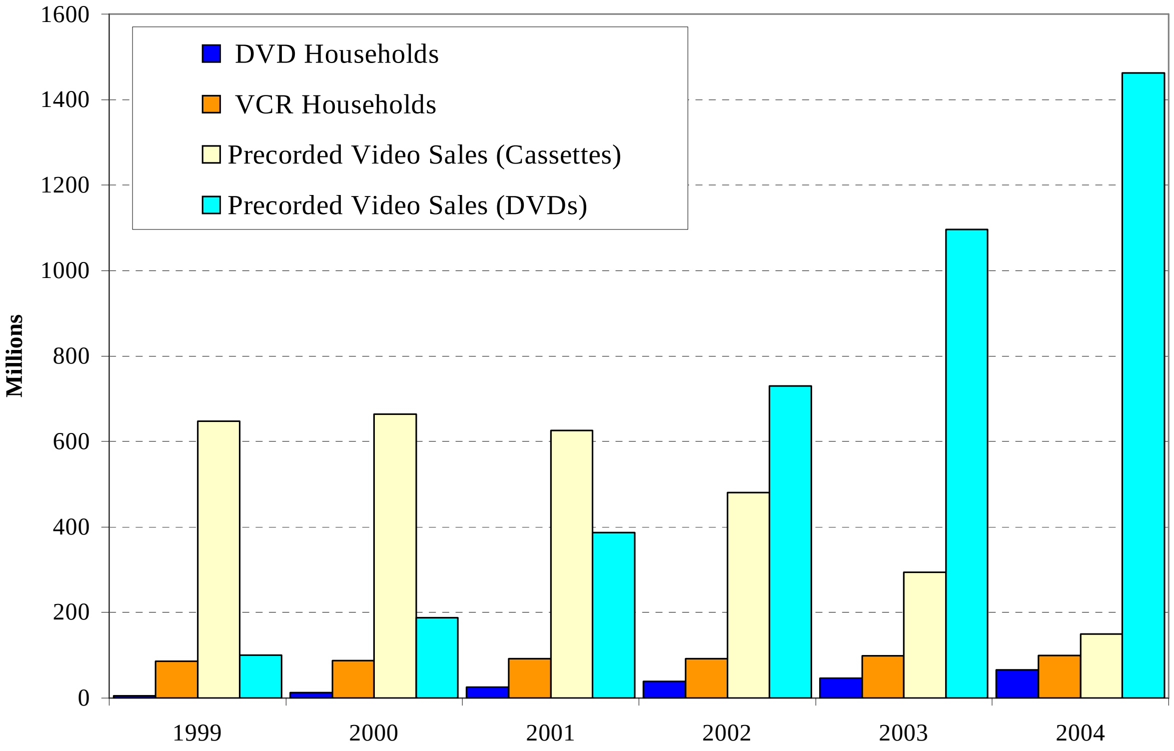


Source: OECD, 2005.

Converged Applications

Status

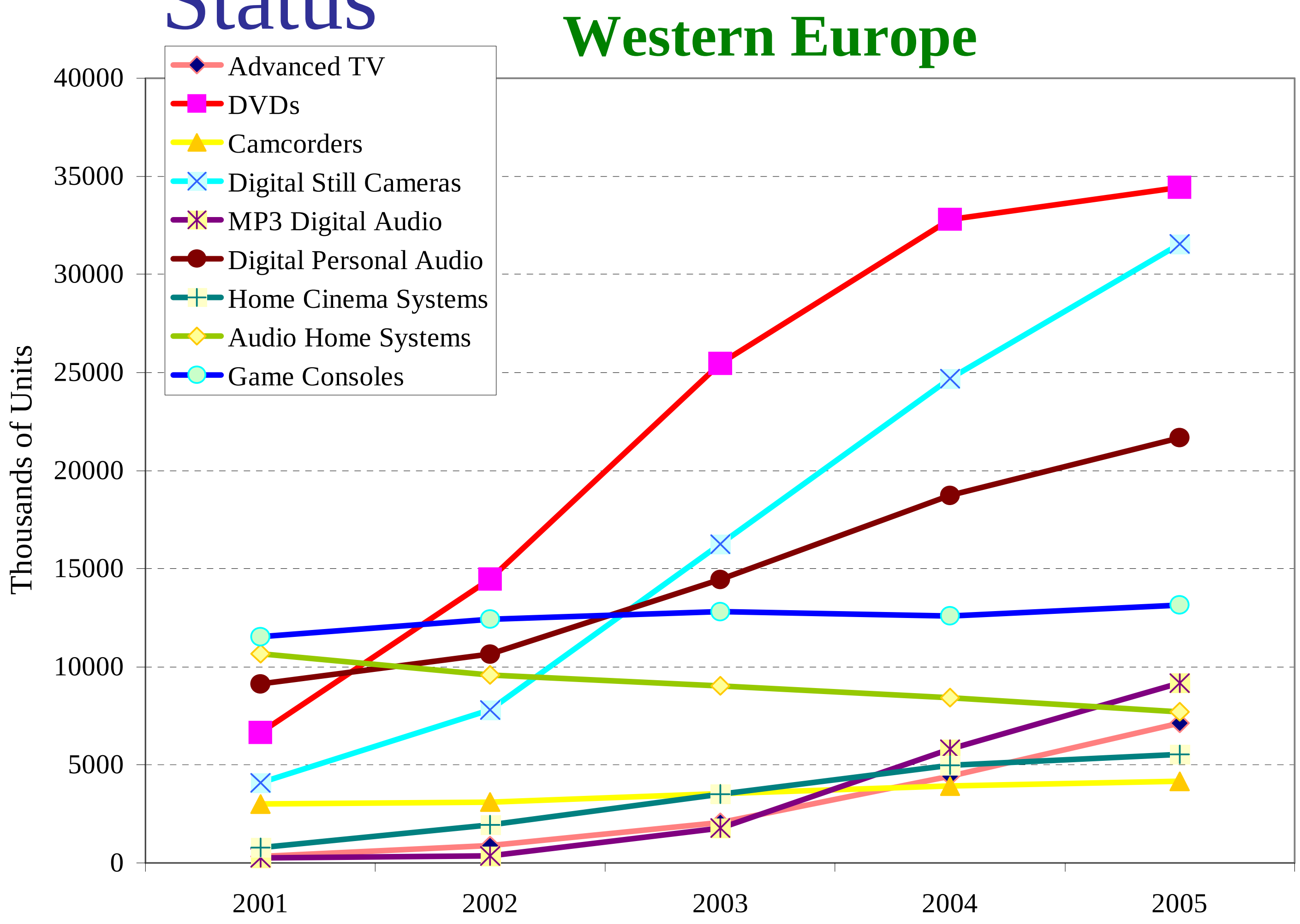
DVD and Video Cassette Sales



Source: Digital Future Report, USC 2004, Standards and Poor, Video Business

Converged Applications

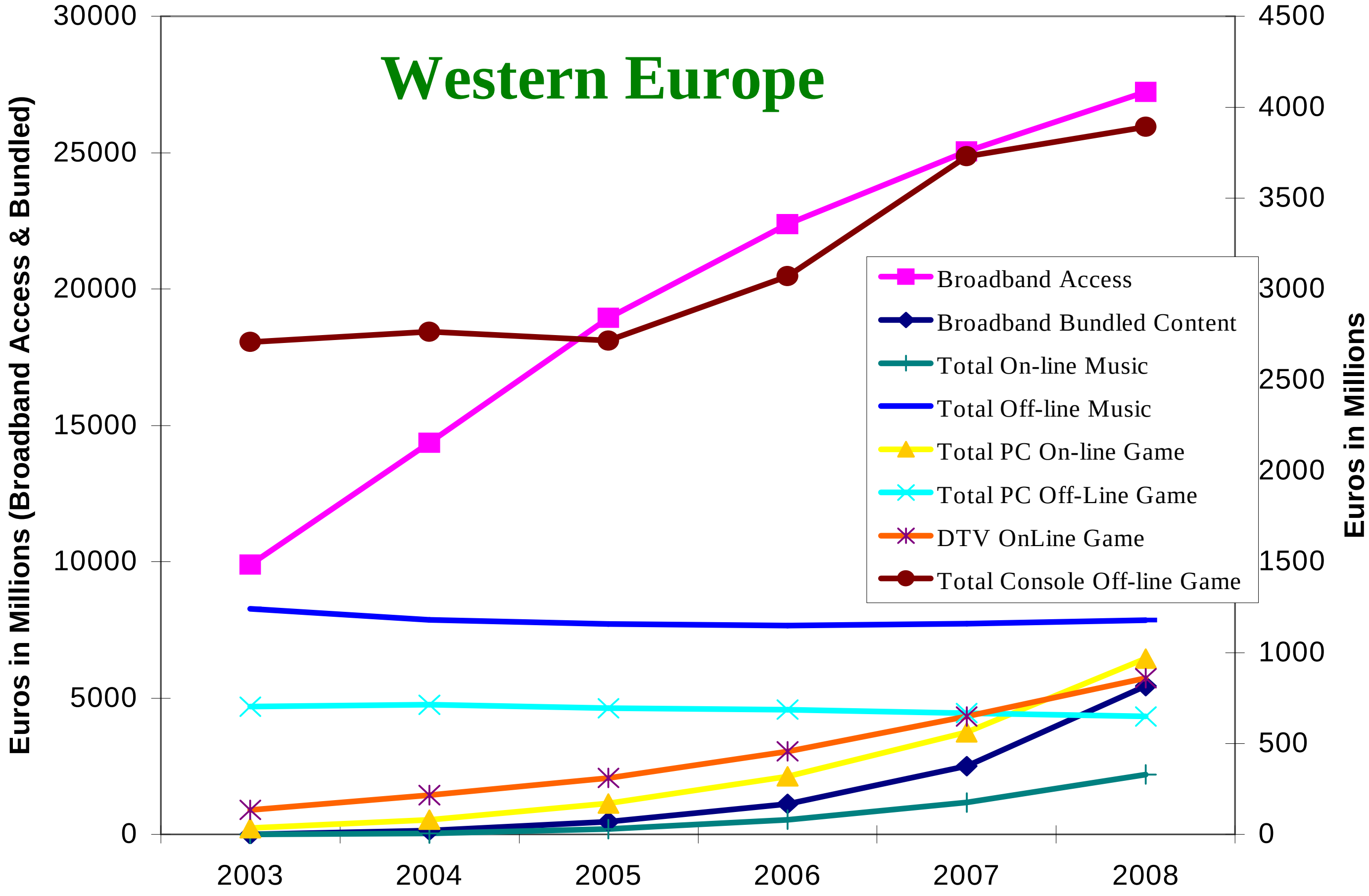
Status



Substitution Of Analog For Digital Format Reflects Consumer Demand For High Resolution Format

Source: European Information Technology Observatory, 2005.

Converged Applications
Status



Off-Line Formats Still Dominate On-Line Formats Accentuating Need for New Content

Source: European Information Technology Observatory, 2005.

Research Questions

1. What is the "value proposition" for end-users to access applications across different devices and in fixed-wireless space?
2. What are the necessary interface experience that will encourage adoption of converged fixed-wireless applications?
3. What are the requirements for the service platforms and organizing model that would support profitable revenues?

VISOR Framework

Value Proposition

Interface

Service Platform

Operational Model

Revenue

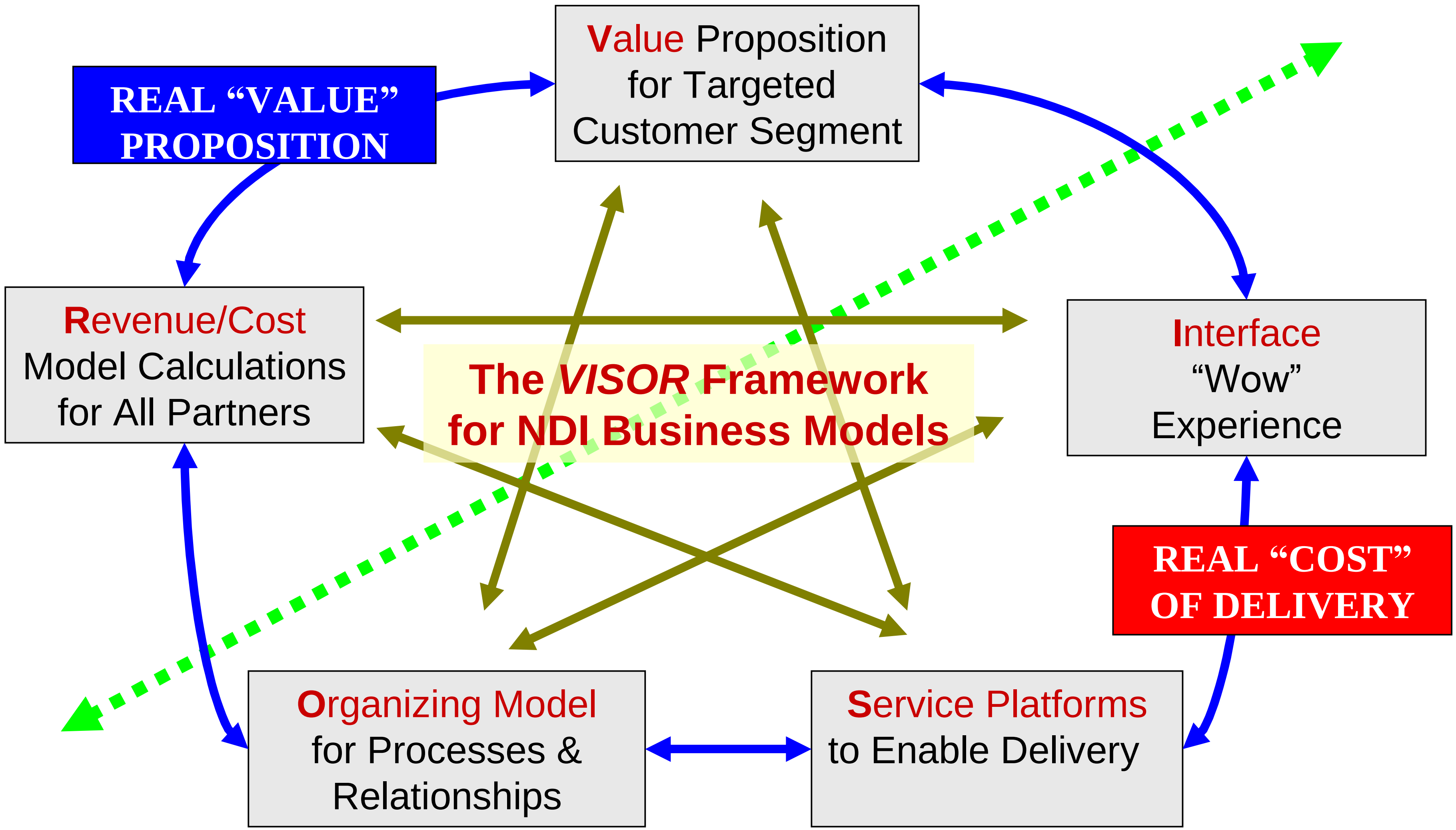
- Little systematic conception and agreement exists on what a business model is.
- In new market-spaces, such as NDI, search for viable business models is critical.
- Important to articulate and define the elements of a business model to

  (i) attain " common language and framework"

  (ii) use the framework to assess the viability of new business propositions

  (iii) understand the multiple elements that have to be in place for a successful business model.

Articulating IT-Intensive Business Models



VISOR Framework

Defines how a firm responds to a customer need, latent or established, thus creating and delivering the greatest value to the customer, in a profitable and sustainable manner, and, as such, optimizes costs to value creation.

A successful business model is one delivers the greatest value proposition that maximize the willingness to pay on the part of its target consumers against the ability to minimize the real cost (tangible and intangible) of the provision of these services.

VISOR Framework

VALUE PROPOSITION

Why particular customer segments would value an enterprise’s products and services and be willing to pay a premium price for them..

INTERFACE

The success of delivery of a product or service is heavily predicated on the user interface experience in terms of ease of use, simplicity, convenience, and positive energy, and should generate a “Wow” experience.

VISOR Framework

SERVICE PLATFORMS

IT platforms that enable, shape, and support the business processes and relationships that are needed to deliver the products and services, as well as improve the value proposition.

ORGANIZING MODEL

Describes how an enterprise or a set of partners will organize business processes, value chains, and partner relationships to effectively and efficiently deliver products and services.

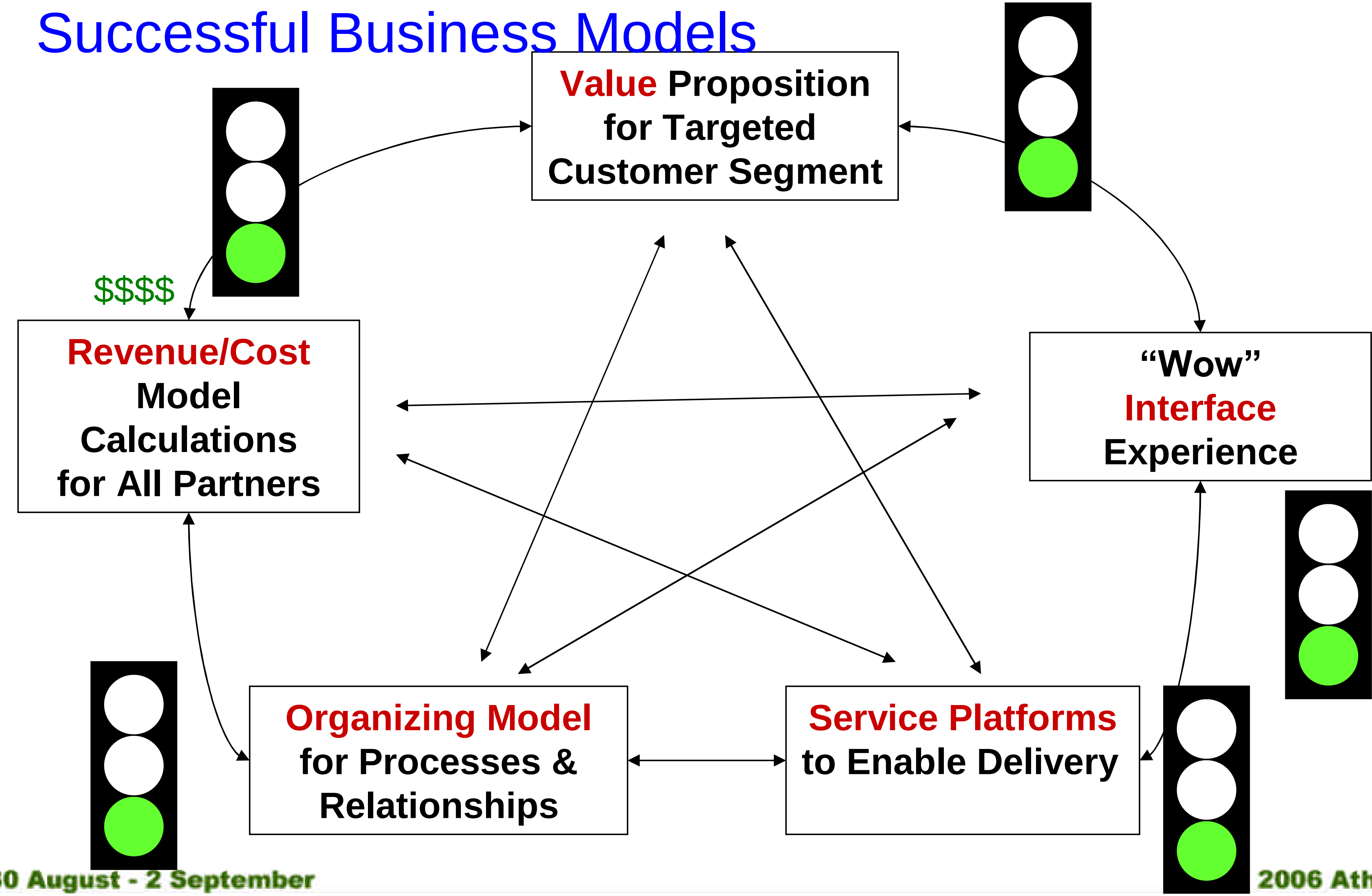
VISOR Framework

REVENUE/COST SHARING

In a good business model, the combination of the value proposition, the way that offerings are delivered, and the investments in IT platforms are such that revenues exceed costs and attractive for all partners.

VISOR Framework

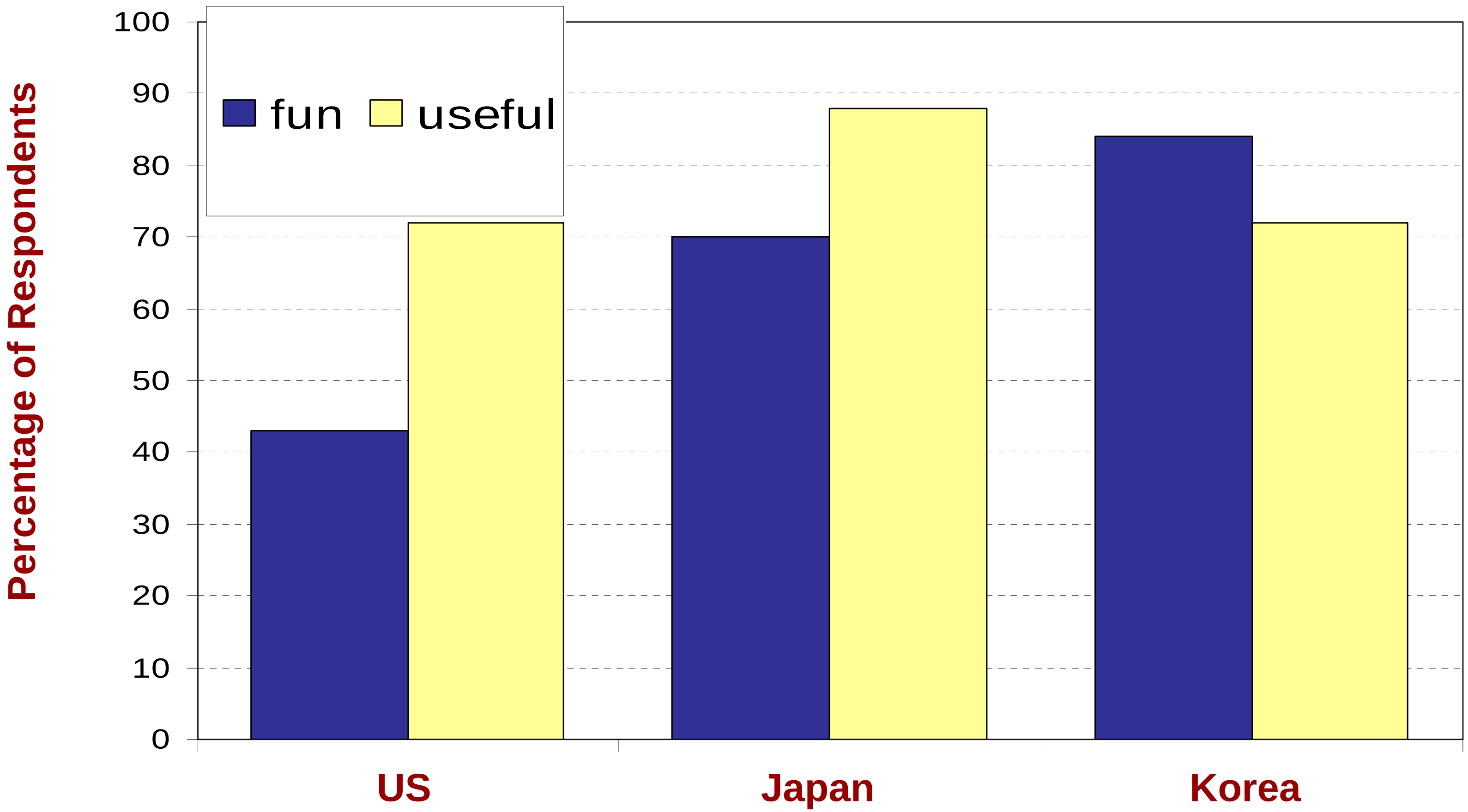
Successful Business Models



What should the value proposition for end-users be to encourage them to access applications across different devices and in both fixed-wireless space?

Value Proposition

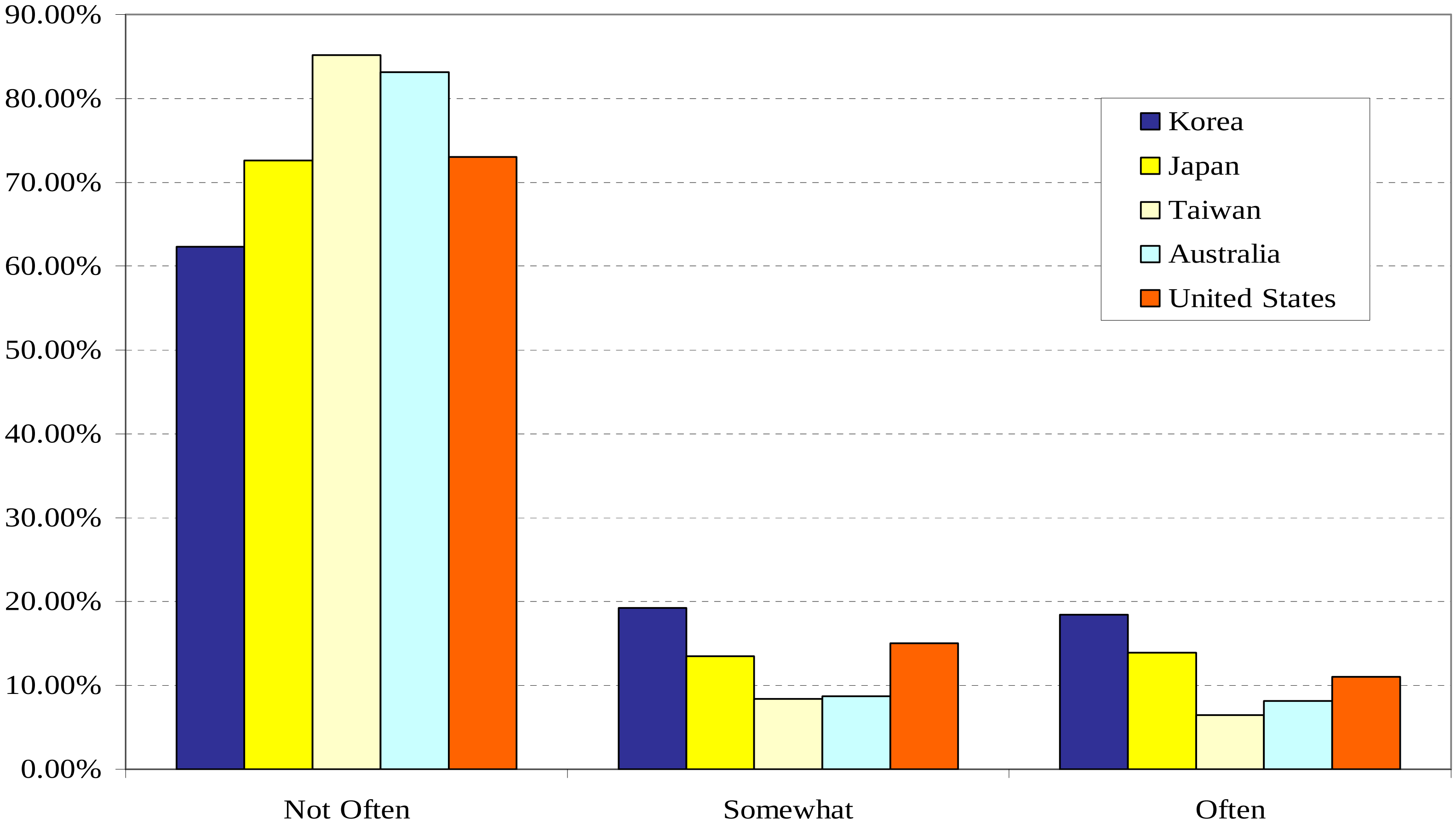
Reasons for using mobile data services



Source: USC-WMIS,2004

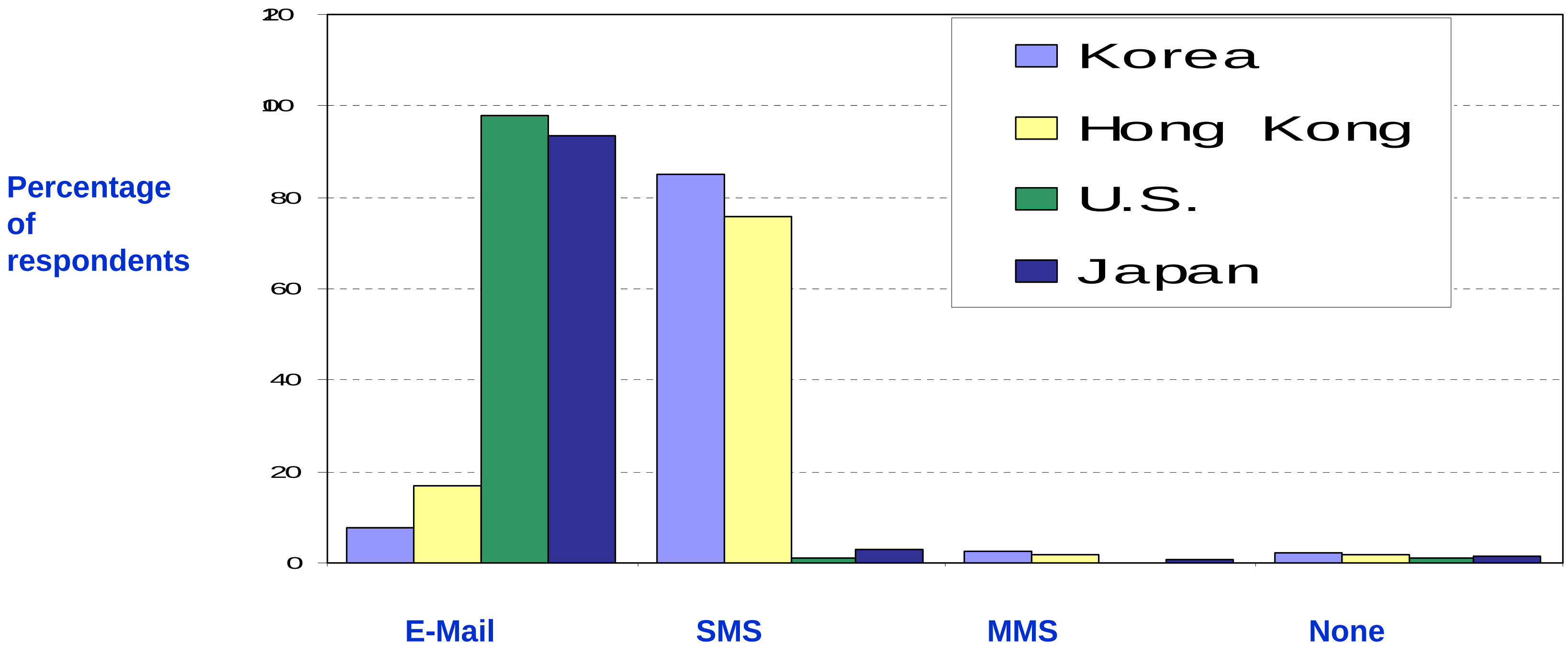
Value Proposition

Frequency of Use Mobile Commerce Services



Value Proposition

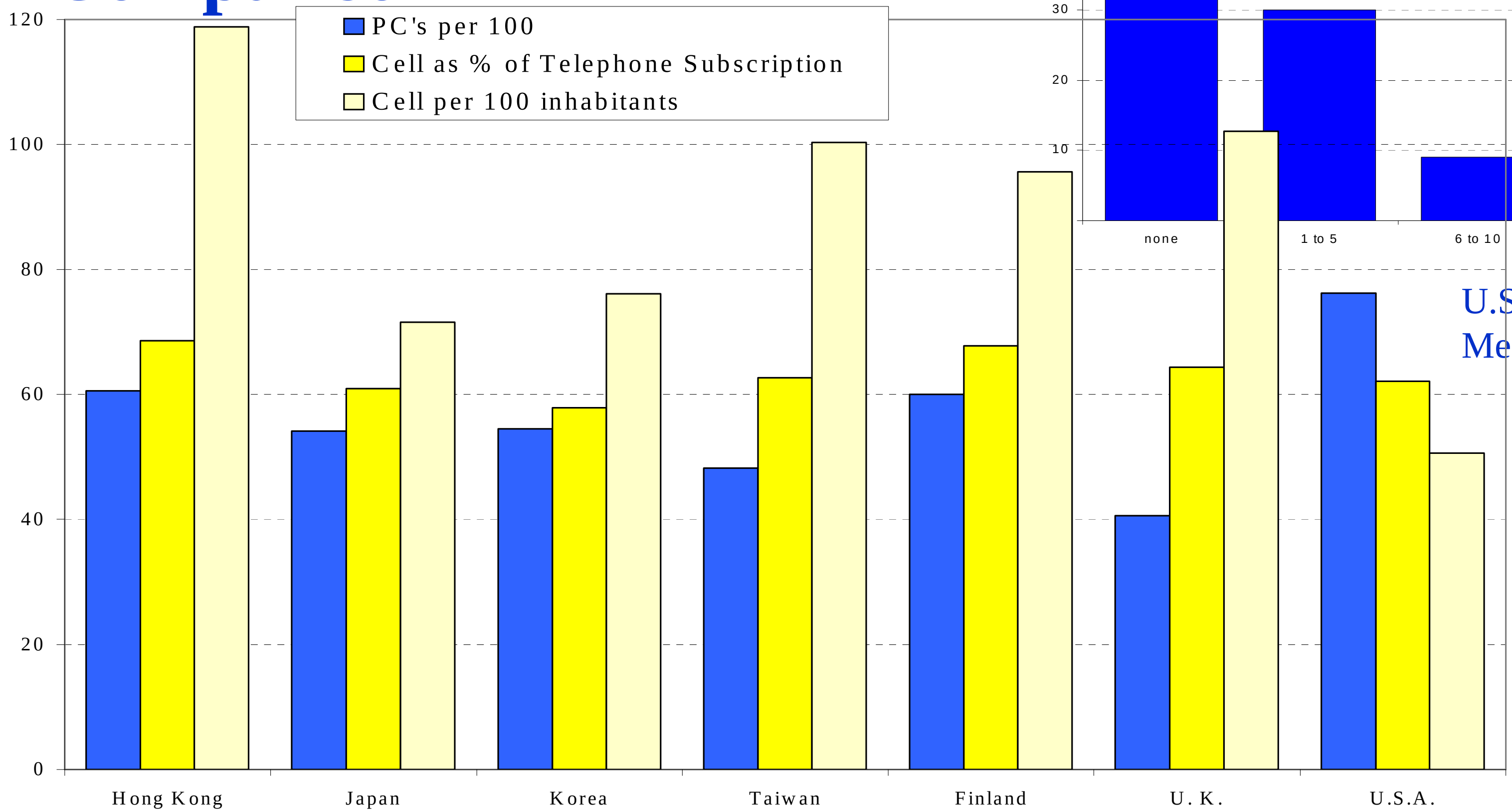
Most frequently used communications services on daily basis

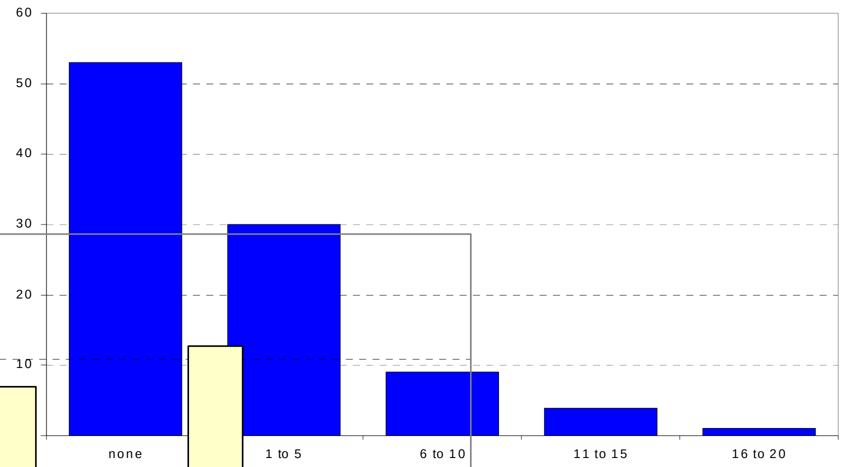


Source: USC-WMIS,2004

Value Proposition

Select Cross-Country Comparison





U.S. :Number of Text Messages Sent per Day

Source: ITU, 2006: WMIS,2004

Value Proposition

Communications Life-Styles

Cell Phones are ubiquitous…..

- 90% of 18-30 year olds own cell phones and 83% say it has high value for money

… but they aren't substitutes for other screens, even by the youngest, most adept consumers

- 41% can connect to internet, but don't

-70% don't have ability to watch video

-Watch and download video was most important feature for ***1.1% of Millennials***

Cell Phones as Video Players

Preferred length of video content for cell phones	**1 to 5 minutes (47%)**

Source: Frank N. Magid & Associates, 2005.

Top type of TV programs Millennials would like to watch on their cell phones

- News programs (39%)

- Music Videos (32%)

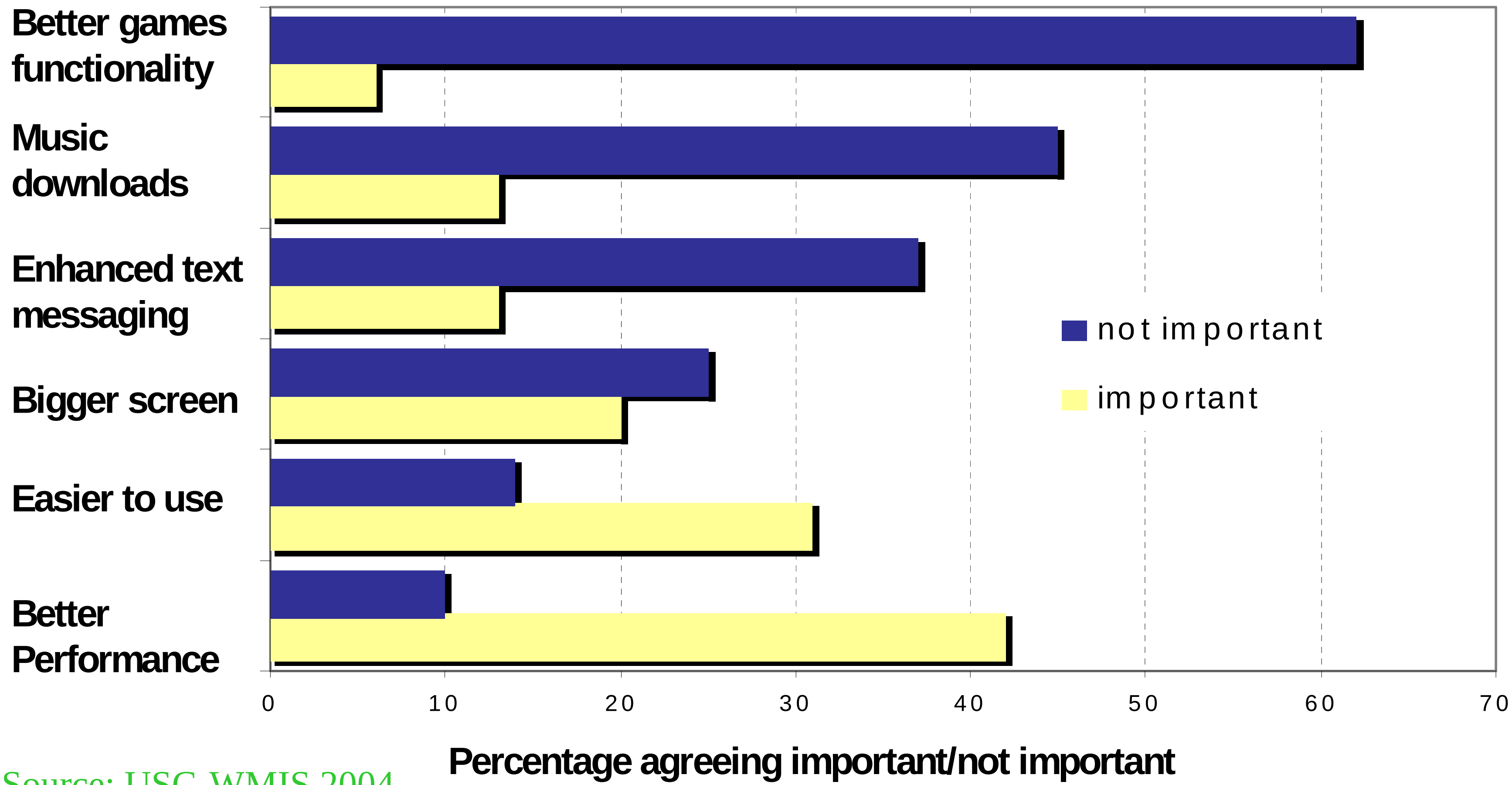
- Situation Comedies (30%)

- Sports (27%)

What are the “interface drivers” that would retard adoption of converged fixed-wireless applications?

Interface Drivers

Performance and ease of use: U.S.



Source: USC-WMIS,2004

What are the requirements for the service platforms and organizing model that would support profitable revenues?

Service Platform

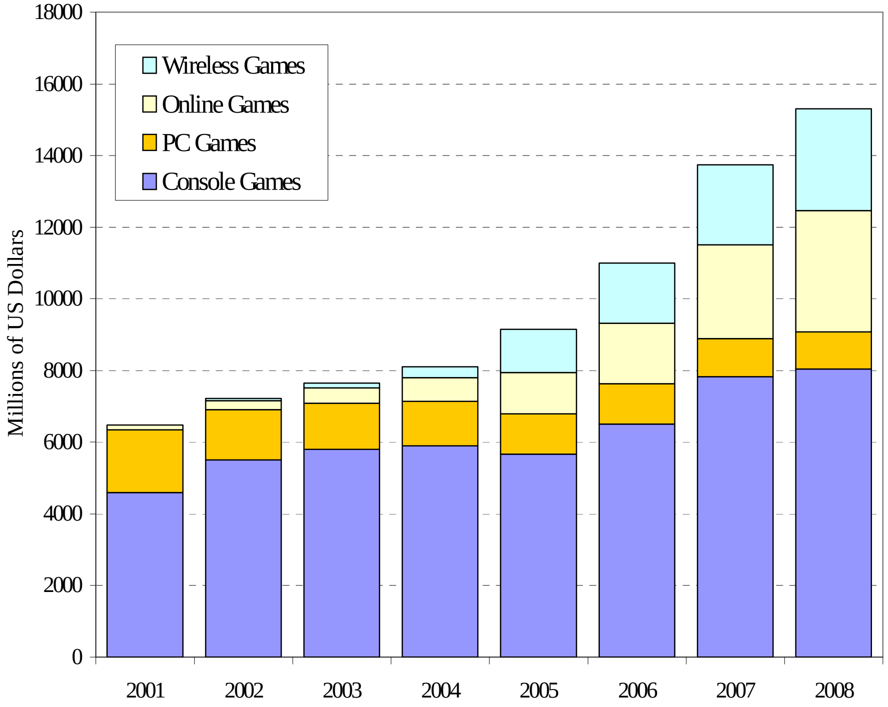
Technology (2005)	Bandwidth	Coverage	QoS Support	Security Enablement
Ethernet	100/70	Whole House	Positive	Positive
IEEE 802.11b	11/5	2 rooms	Negative	Negative
IEEE 802.11g	54/25	2 rooms	Negative	Negative
DECT	2/2	Whole House	Positive	Positive
Bluetooth 1.2	0.7/0.4	1 room	Positive	Negative
HomePNA 2.0	10/6	2 rooms	Positive	Positive
HomePlug 1.0	14/5	Whole House	Negative	

M/Bits (L1/L7)

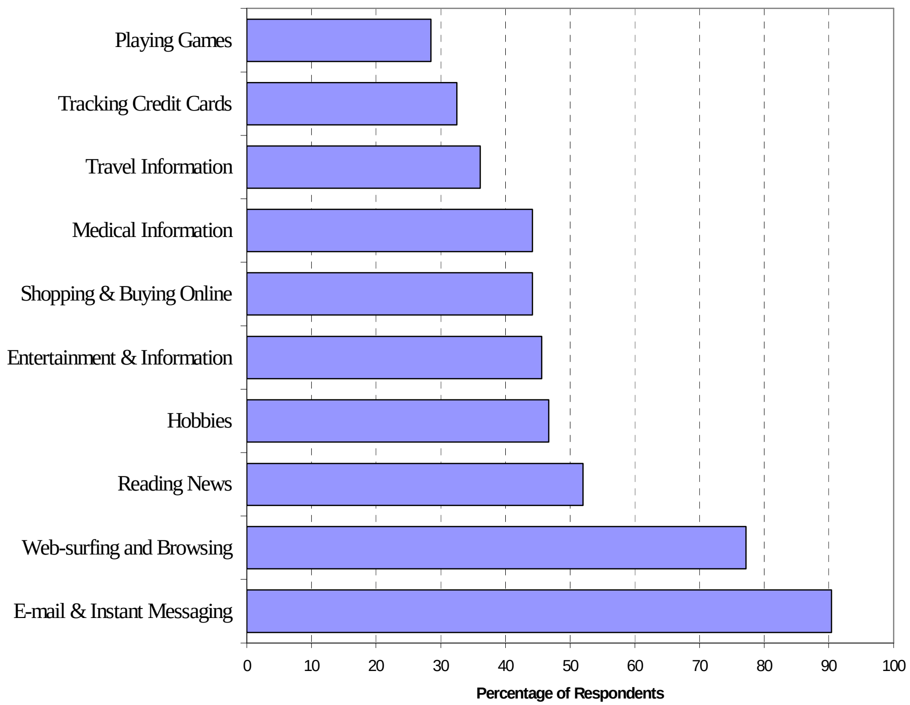
Source: Hendrix et. al, September 2005.

Service Platforms

Video Game Market (U.S.)

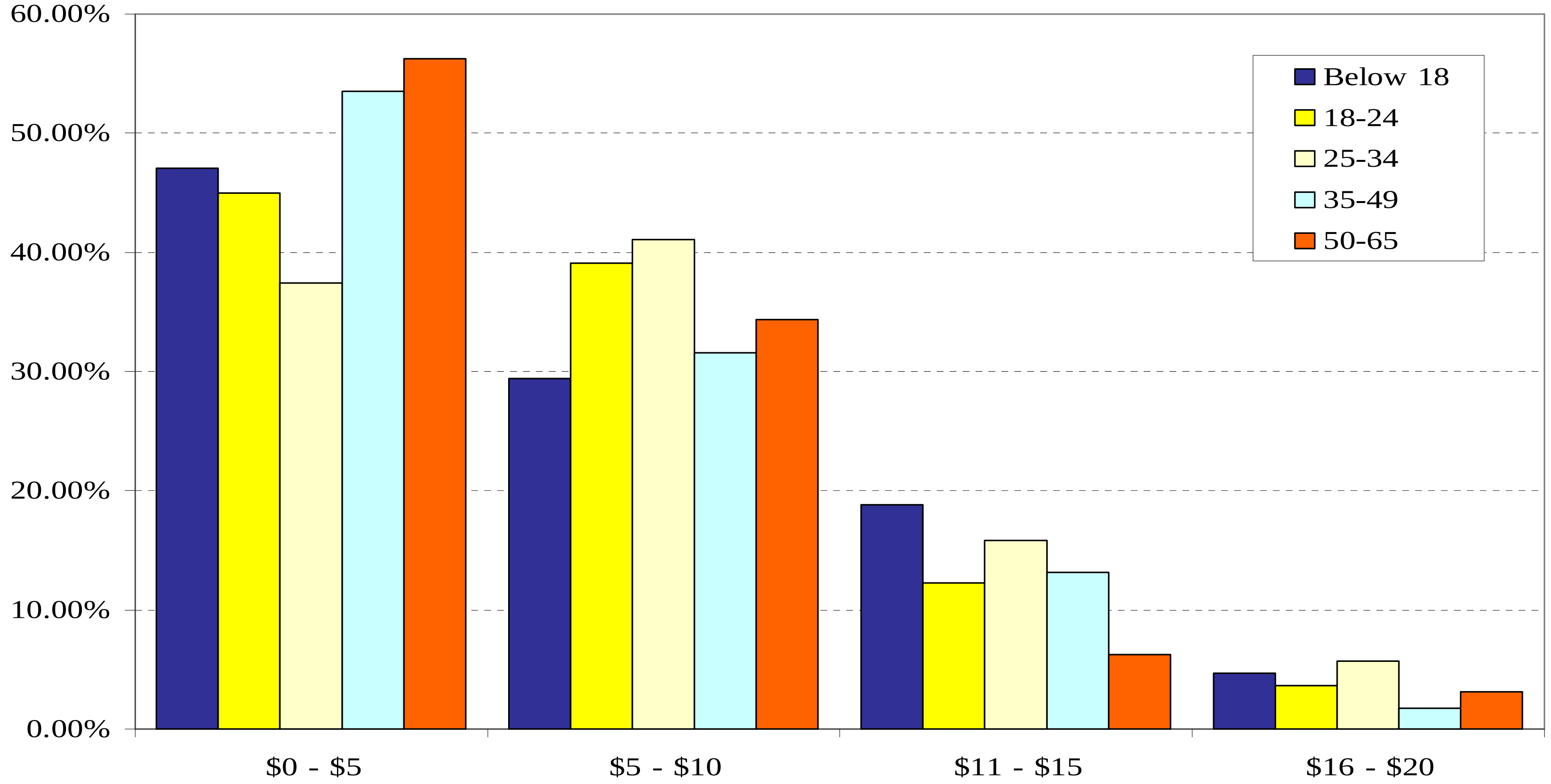


Top Ten Internet Activities



Revenue Model

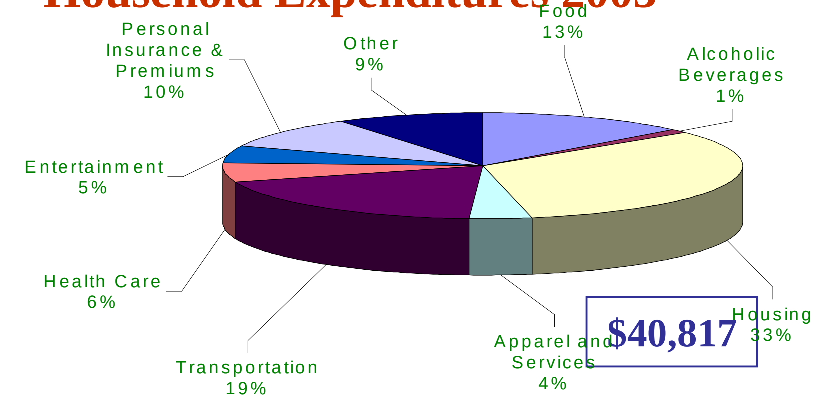
Willingness to Pay (U.S.) for Mobile Data Services



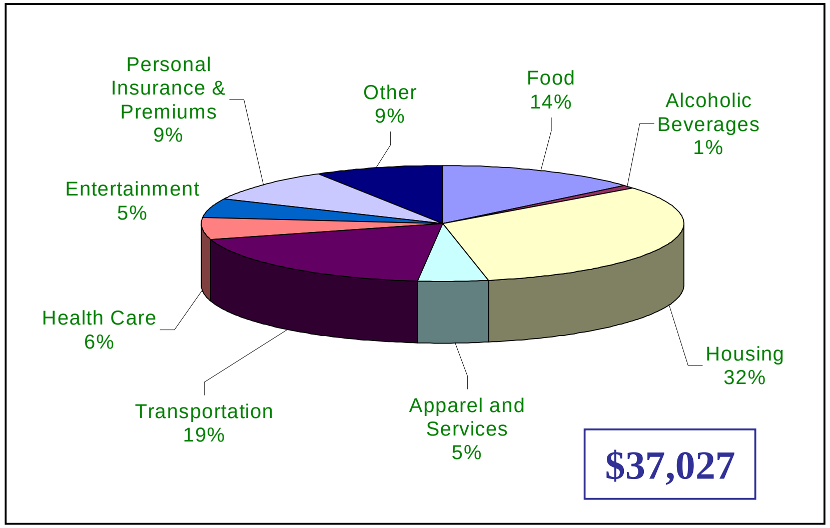
Source: USC-WMIS,2006

Revenue Model

Household Expenditures 2003



Household Expenditures 1999



Focus on Entertainment Forms of Content Encourages **Substitution** vs. Value Creation By End-Users

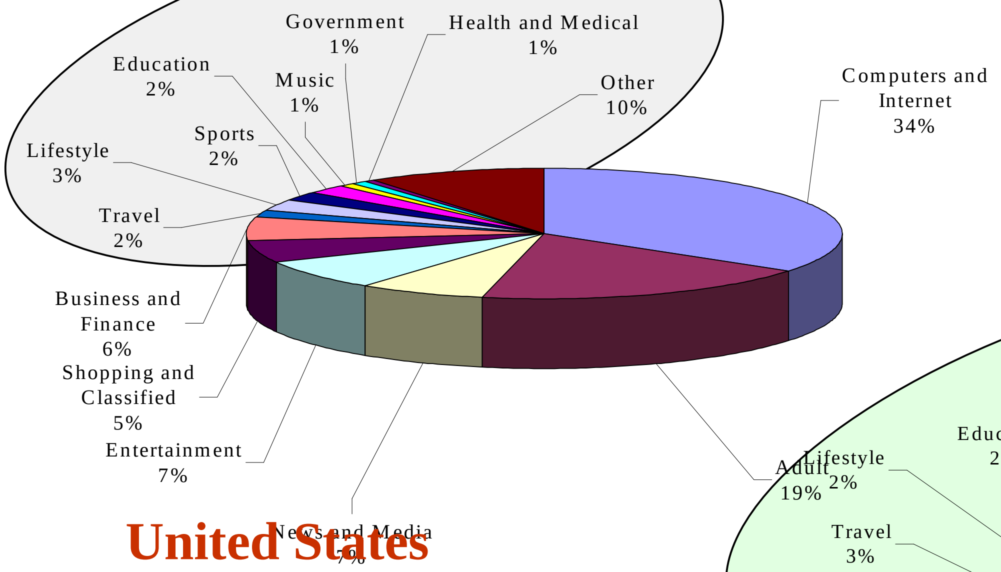
Focus on Interactive Multimedia Content Encourages **Value Creation** By End-Users

Source: Bureau of Labor Statistics, 2005.

Revenue Model

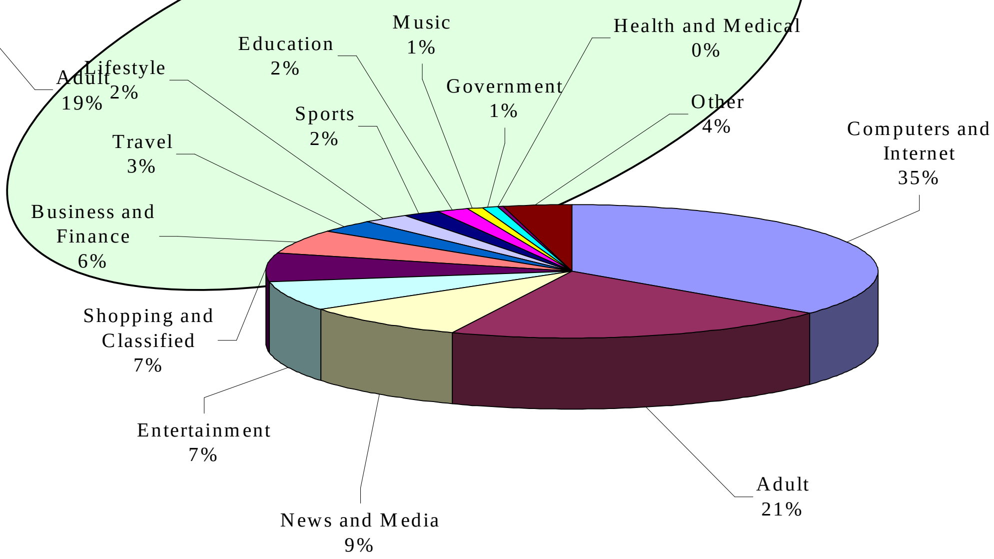
Ranking of Internet Activity

From value substitution to value creation



United States

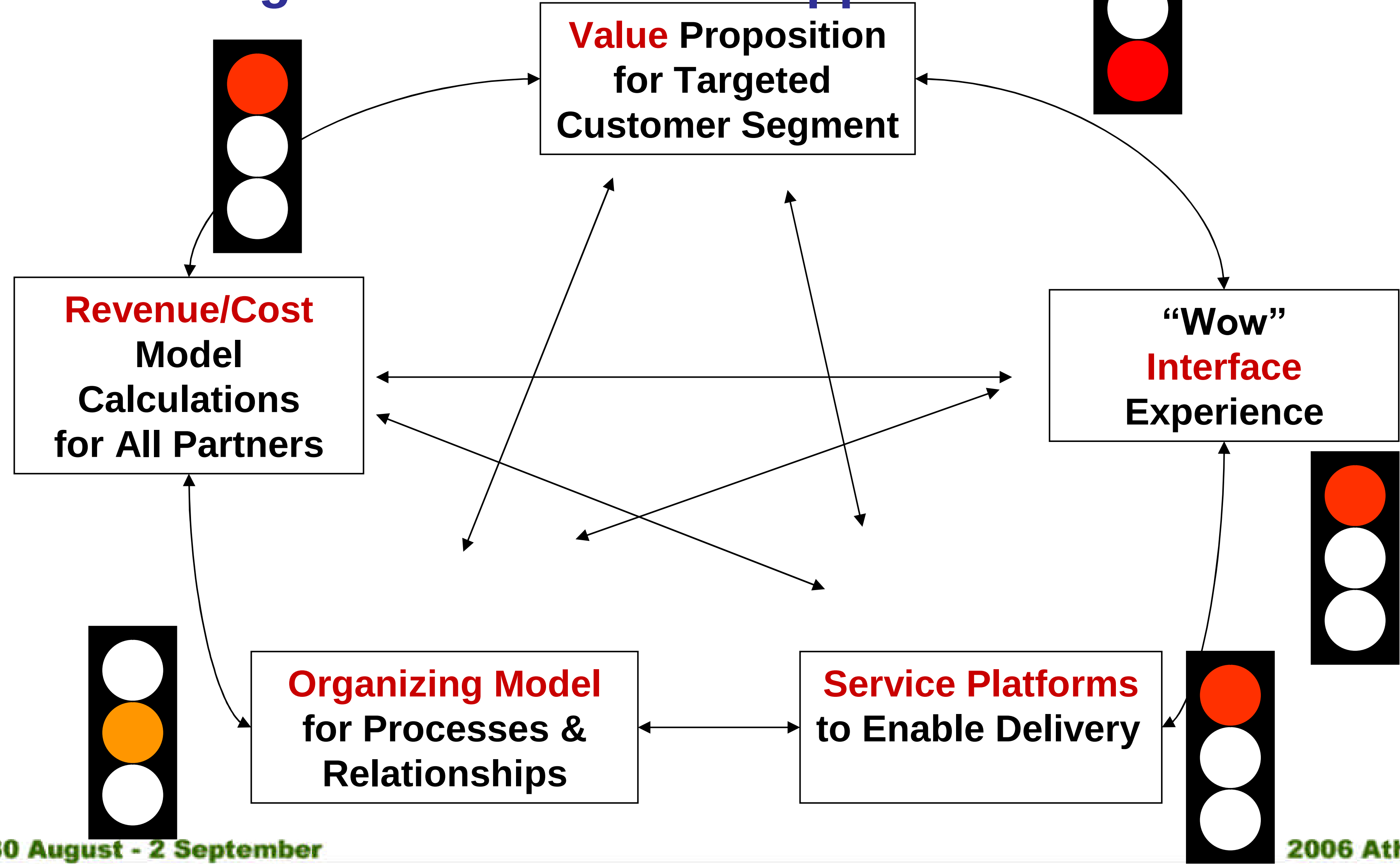
United Kingdom



Potential “interactive content” component is still small

VISOR Framework

Converged Fixed-Wireless Applications



Conclusions

Preliminary Assessment Using VISOR (U.S.)

Characteristics for Converged Fixed-Mobile Applications

1. Value proposition must focus on productivity enhancements.
2. Ease of use is crucial and interoperability issues have to be addressed. “Plug and Play” will be the norm.
3. Service platforms must support interoperability across time/space/devices .
4. Revenue model must focus on value creation

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Thank You

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