

Issues/Opportunities & Trends

Mobile and IP worlds are converging

These worlds have very **different business models**

Opportunity = **new** services and **new** value creation

Action is needed to unlock the development

The IP Challenge:

IP Inter-working (IPI) and Sustainable Business Model

Mauro Sentinelli
GSMA - Deputy Chairman

Paris

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OPPORTUNITY from CONVERGENCE

Mobile and Internet 2.0

- New Services/Value
- Faster Time-to-Market
- Improved Overall Economics
- Equitable Revenue Distribution
- Long Term Business Sustainability

Threats from the IP world

Revenue

Change of **business model**

Quality

Inability to guarantee **End Services**

Efficiency

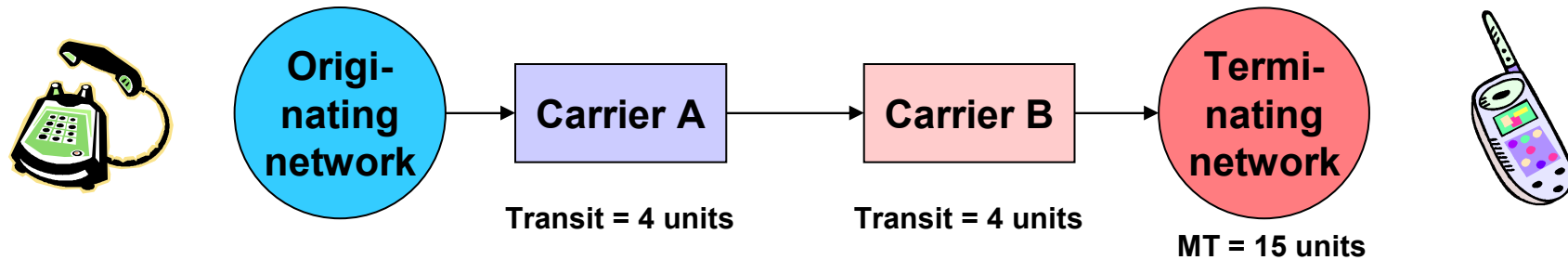
Networks overloaded with **unwanted traffic**

Scalability

Networks unable to cope with **load**

➤ **Unhappy Customers**

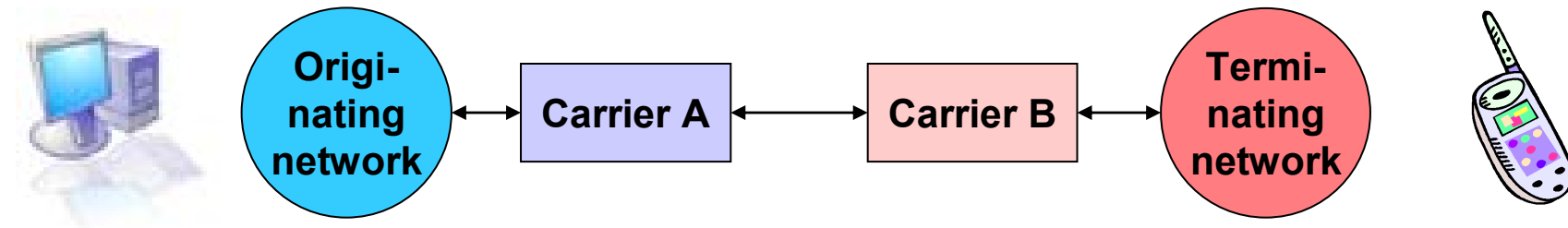
Circuit switched interconnect



Total Charge to originating network = Transit + Mobile Termination fee
= 4+4+15 = 23 units

- Circuit switched interconnect principle:
 - Termination fee (MT) is determined by the receiving operator and is normally the same charge to all
 - Carrier A charges originating operator **a charge which will include MT plus all carrier costs**
 - **Fee is paid by originating operator and covers all costs**
 - **Carrier A passes MT plus part of the transit fee onto carrier B**

Packet switched bit-pipe interconnect



- Packet switched bit-pipe interconnect principle:
 - There is no termination charge determined by distant end
 - Carrier A charges originating operator for all data sent and received
 - Carrier B charges terminating operator for all data sent and received
 - Carriers pass no money between each other (peering model)
 - **Access-based interconnect model**

Circuit Vs Packet

The long running circuit-switched model:

- Equitable **distribution** of revenue
- Simple accounting procedures with “**cascade**” **payments** between carriers.
- High Quality of Service (**QoS**).
- **Ubiquitous** service (e.g. global telephony).

The packet model

- **Best Effort** is the key way of delivery
- No **QoS** guaranteed / No **Admission** Control
- No **spam** control
- No **scalability** / No **future** guaranteed

Why is IPI strategy vital to the Converging IP - Mobile industries?

- **Termination charges are a considerable part of infrastructure value chain – currently this is not possible with IP**
- **Maintain Calling Party Pays type principles with IP**
 - He who perceives the value pay
 - Value based transactions – maximise the value, not bit-pipe charging
- **Without a different IP inter-working model:**
 - Managing spam becomes very expensive – costs which are reflected on the receiving party
- **In worst case:**
 - Expensive frequency bandwidth tied up with low revenue, unwanted spam
 - Customers unable to choose what they wish to receive and not willing to use handset

IP Interworking goals

- Ensure a **customer centric**
Sustainable Business Model
- Introduce a **fair value chain**
- Foster continuous **market growth**
- Establish **alternatives** to access-based inter-working

IP Interworking Principles

- **End-to-End service delivery**
 - emphasis on **Quality of Service** and **Universal Charging Principles**
- **Service interoperability**
 - **Universal Service Inter-working** (fixed & mobile)
- **Third party management**
 - managed access, interconnect agreement, **SLA**
- **Customer protection**
 - against misuse e.g. **spam, identity theft, fraud, invasion of privacy**, etc.
- **Cascade payments for all actors/networks involved in the value chain**
 - **equitable and balanced** division of revenue in service delivery chain
- **Initiating party pays (CPP)**
 - drives market penetration/usage, matches “**willingness to pay**”
- **Supporting value-based service pricing**
 - reflecting the **value of mobile services** to the consumer
- **Customer choice**
 - The customer will make the choice of **On/Off Net**
- **Ease of use**
 - IPI should **simplify** all solutions and not add undue complexity at any level

Overview of Initiating/CPP

Mobile operators generally inter-work based on termination rates and CPP

- provides maximum service value for the consumer
 - sustainable distribution of revenue through the value chain
 - ensures customer does not pay to receive messages
 - prevents customer from unsolicited messages (spam, virus)
 - maximises use of limited and valuable spectrum resources
- Customer can understand the charges and manage the costs

Back-Up Slides

What kind of services do consumers want?

- Best effort services?
- High-quality end-to-end services?
- The right to choose from both?
- Universal services
- Price transparency
 - Clear charges – know what it will cost
 - Not to pay to receive unwanted data
- Security
- Little or no advertising
- To be able to retrieve data quickly and easily
- We must protect consumers against:
 - Malicious attack (e.g. Identity-theft, viruses...).
 - Unsolicited content (e.g. Spam, Spim, Spmms...).
 - Unsuitable content (e.g. adult material).

A sustainable future for all?

- **Have we learnt from past experience?**
 - The “dot com” boom/bust scenario
 - The fixed telco experience (“all you can eat” access).
 - The ISP experience, the move toward premium services.
- **Internet Religion vs. Economics?**
 - Is a “free” Internet sustainable, or should it be monetised ?
 - Considerable evidence of the need/desire to change and charges emerging
- **Convergence**
 - Technologies – IP Based
 - Products – Mobile and PC offer much the same
 - Wireless – 3G, WLAN, WiMax etc
- **Spam is a huge issue for much of the Internet**
 - Our bandwidth is expensive and a limited resource
 - Pay to receive spam is undesirable to all consumers and almost all businesses
- **There is a need to create value for all the players in the value chain**
 - Ensures economically sustainable opportunities for the wider IP industry

Why Interoperability with Cascade Payment & Fees

- **Interoperability - Essential for widespread use of products**
 - Fixed and mobile convergence
 - IP (Content, Gaming, Applications)
 - Products (MMS, Video, VoIP)
- **Fee Payment**
 - Provides maximum value for the consumer and a fair distribution of revenue in the value chain
 - Enables the operator to capture/sustain value of serving customer without “Walled Gardens”
- **A very effective method of controlling spam - voice and SMS are clear examples**
- **Enables the customer**
 - To understand the charges and to manage the costs
 - Avoid the need to pay to receive unwanted data
 - Avoids excessive and unnecessary advertising
 - To receive quality products and services
 - To have services with simplified payments through one invoice in a trusted environment