GSMA - Roaming from a Verbal to a Visual World

Aoife Sexton, Executive Director,

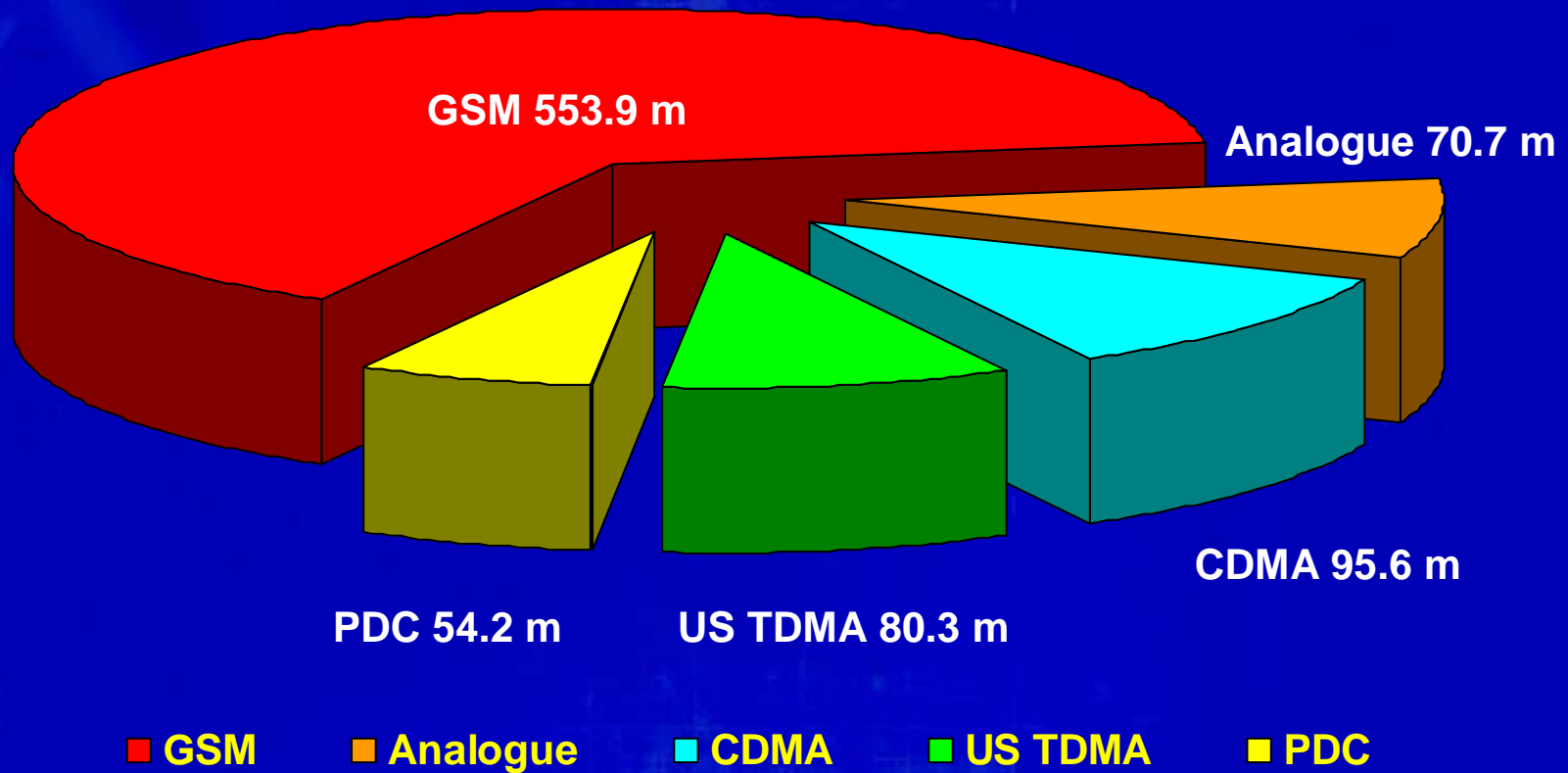**Global Regulatory & Public Affairs**

Overview

- **GSM - the Success Story**

- **GSMA Structure**

- **Key Challenges for GSM**

- **Key GSMA Initiatives**

- **Summary**

The GSM Story…

- **GSM is one of the greatest technological success stories ever…**

  - **Over 560 million people use GSM services in 171 countries**

    - **1 billion customers projected by end of year 2003**

    - **Over 250 billion GMail SMS's will be sent in 2001**

  - **GSM accounts for 71% of global digital market**

  - **473 operator and 84 industry partner members make up the GSM Association**

    - **59 GSMA operator members hold 3G licenses**
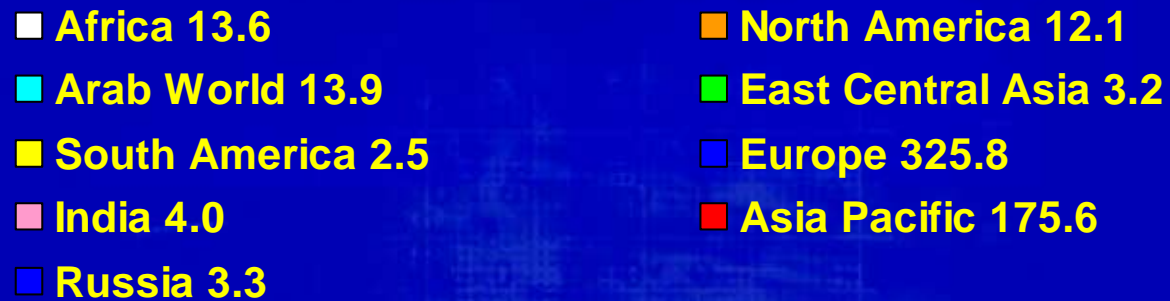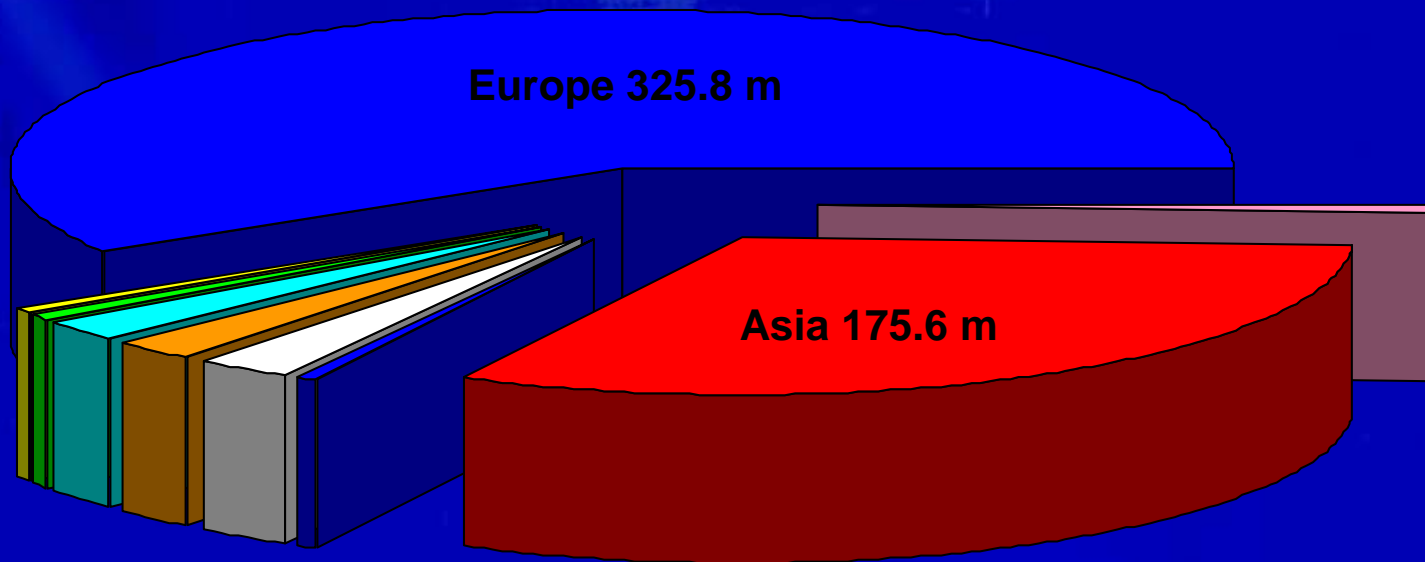
GSM Story…global breakdown

GSM 553.9 m

Analogue 70.7 m

CDMA 95.6 m

PDC 54.2 m

US TDMA 80.3 m

■ GSM   ■ Analogue   ■ CDMA   ■ US TDMA   ■ PDC

Source: EMC World Cellular Database: End of June 2001

GSM Association ©

GSM Story…regional breakdown

Europe 325.8 m

Asia 175.6 m

- Africa 13.6
- Arab World 13.9
- South America 2.5
- India 4.0
- Russia 3.3

- North America 12.1
- East Central Asia 3.2
- Europe 325.8
- Asia Pacific 175.6

GSM Association ©

GSM Story…

- **The GSMA vision is one of a seamless, limitless world of verbal and visual mobility communications**

  - **The GSM family of technologies has been developed through an unparalleled co-operation between operators, standards bodies and industry partners**

- **Competition drives innovation...**

  - **GSM Family offers a clear evolutionary path through GPRS, EDGE to 3GSM / WCDMA**

    - **80 - 85% global operators expected to chose WCDMA**

GSM Story… GSM is a Family
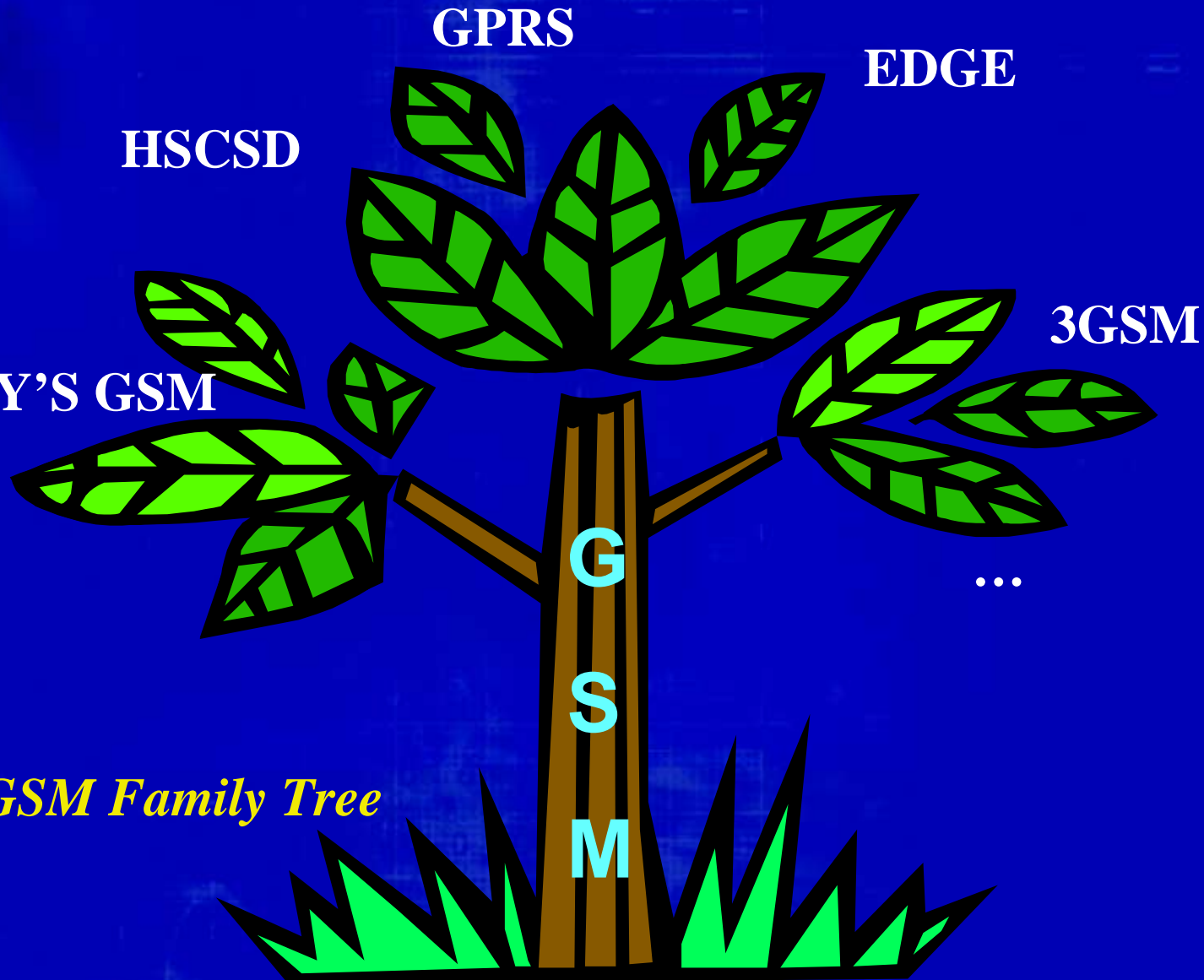
GPRS

EDGE

HSCSD

3GSM

TODAY'S GSM

…

G
S
M

The GSM Family Tree

GSM Association ©

GSM ⇨ GPRS ⇨ EDGE ⇨ 3GSM

GSM Story… 3GSM

- **3GSM is about third generation services**

- **Delivered on an evolved GSM platform**

- **Underlying technology defined by 3GPP**

- **New radio air interface (W-CDMA)**

- **GSMA provides necessary commercial and operating elements to make it work**

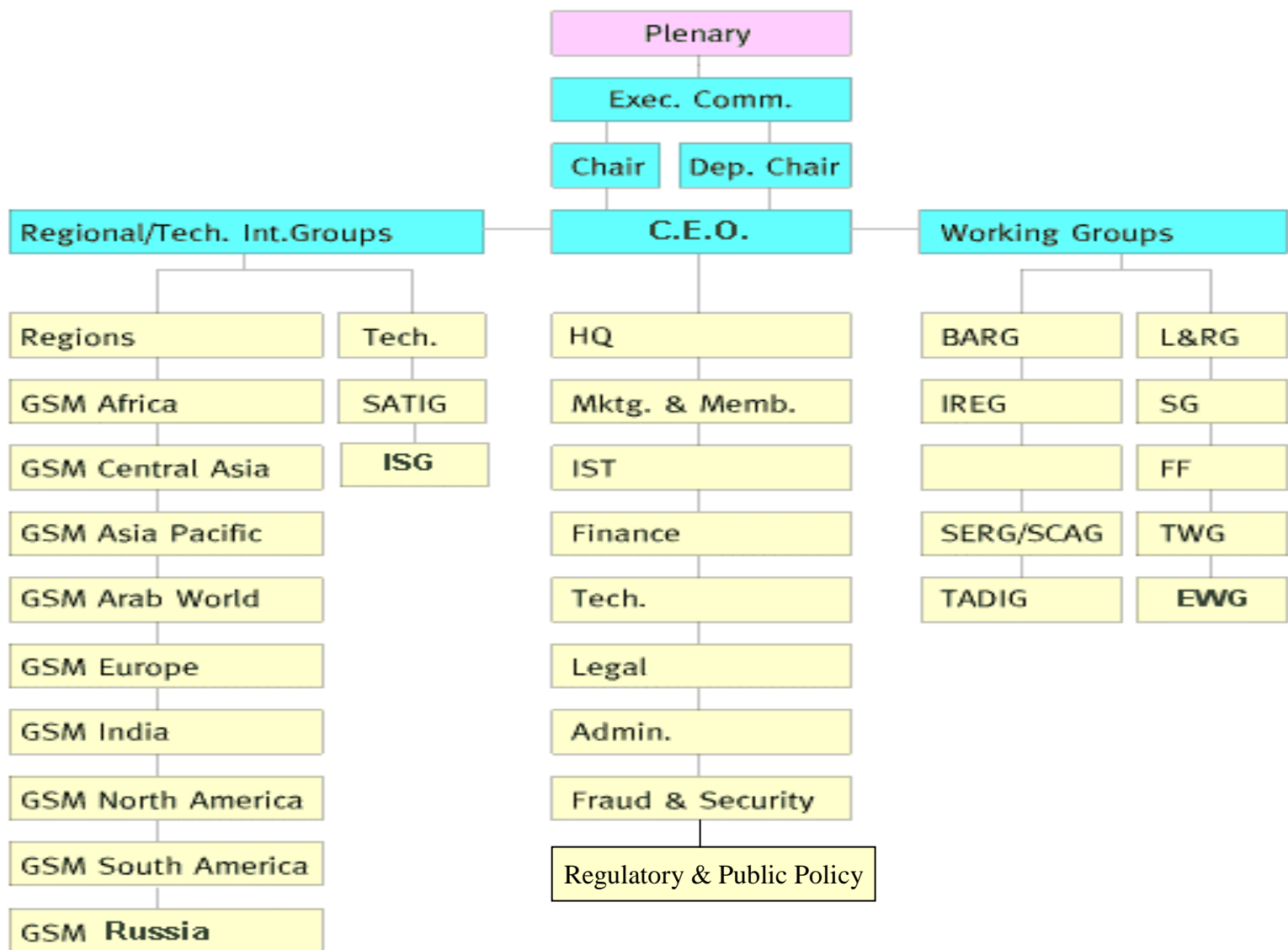*3GSM - It's about Services*

GSM Association Membership

Membership is open to:

- **Licensed GSM mobile network operators**

- **Government regulators/administrations**

Associate Membership is open to:

- **Companies who design or manufacture GSM mobile terminals, infrastructure equipment, system simulators, mobile stations, GSM SIM cards, security systems and billing and accounting systems.**

- **Companies who provide data clearing house services, financial clearing house services, signalling clearing house services and brokers of roaming facilitation services**

- **GRX carriers**

- **Application providers**

GSM Association Structure

	Plenary		
	Exec. Comm.		
	Chair / **Dep. Chair**		
Regional/Tech. Int.Groups	**C.E.O.**	**Working Groups**	

Regions	Tech.	HQ	BARG	L&RG
GSM Africa	SATIG	Mktg. & Memb.	IREG	SG
GSM Central Asia	ISG	IST		FF
GSM Asia Pacific		Finance	SERG/SCAG	TWG
GSM Arab World		Tech.	TADIG	EWG
GSM Europe		Legal		
GSM India		Admin.		
GSM North America		Fraud & Security		
GSM South America		Regulatory & Public Policy		
GSM Russia				

Challenges Facing GSM

- **Wireless data represents the new business cycle**

  – **Voice growth will slow - but may not decline**

    • **Projections that the Pacific Rim region will replace Europe as the largest GSM customer base**

- **Wireless data must become the new growth engine for operators**

  – **End users are ready to take advantage of data mobility just as they valued voice mobility**

    – **PDA's, laptops, i-mode are indicators of demand**

Challenges Facing GSM

- **Who is going to adddress our challenges?**
  - **Operators must assume a renewed leadership role**
    - **Or be prepared to take what others think is best**
    - **Demand excellence on behalf of end users**
- **GSM has been successful because industry has worked together**
  - **Co-operation still exists…but sometimes consensus is more difficult to obtain**
- **The GSMA is one venue for operator requirements to be vetted and consensus developed**

A Way Forward

- **GSMA leadership activities**
  - <u>**GPRS Roaming Initiative**</u>
    - **Identify/develop GPRS roaming enablers -GRX carriers**
  - <u>**MServices Initiative**</u>
    - **Define operator requirements for Mobile Internet**
  - <u>**Task Force and Working Group Initiatives**</u>
    - **CTO identified strategic cross functional issues**
      - **Roaming (Inter / Intra Operator - Region - Technology)**
      - **M-Services Phase II (M-Commerce, SMS Evolution)**
      - **Terminal Device Certification Strategy (Interoperability)**
      - **Minimum Performance Criteria (BIC Benchmarking)**
      - **End to End Services Roadmap (Security, Voice, Data)**
  - <u>**Global Regulatory Initiative**</u>
    - **Identify and develop positions on global regulatory issues affecting operators**

GSM Association ©

GSMA Leadership Activities

- **ROAMING**

  – **Facilitation of international roaming is a principal objective of GSMA and has contributed to success of GSM**

  – **Working groups cover all aspect of roaming including**

    - **Billing and Framework for Charging - BARG**

    - **Transfer of Data (Transfer Accounting Protocol) - TADIG**

    - **Security Aspects - SG**

    - **Legal (Standard Roaming Agreement) - LRG**

    - **Technical Aspects (Testing) - IREG**

    - **Services- Minimum Roaming Services- SeRG**

    - **Prevention of Fraud - FF**

GSMA Leadership Activities

- **ROAMING**
  - **Focus has turned to enabling roaming between 2GSM and 2.5 GSM, 2.5 GSM and 3GSM and 3GSM to 3GSM**
  - **Newly created CTO Task Forces with Working Groups intent on making roaming with advanced services a reality**
    - **Developing operator requirements for input to standards bodies**
    - **Ensuring backward /forward interoperability between 2GSM, 2.5GSM, and 3GSM**
    - **Producing standardised procedures (standard agreements, testing,fraud prevention etc)**
    - **Developing billing procedures and charging frameworks**
    - **Reviewing evolution of TAP in 3GSM**
    - **Developing procedures to enable MCommerce roaming**
    - **Developing Operator requirements for 3G Terminal test cases**
    - **Addressing possible regulatory impediments to roaming**

GSMA Leadership Activities

- **ROAMING**
  - **GSMA puts in place charging principles for roaming**
    - **IOT - Inter Operator Tariff - Wholesale Tariffs**
    - **Actual setting of tariffs are left to individual operators**
    - **Retail Tariffs outside scope of GSMA**

  - **Sector Enquiry - Initial Findings produced- No conclusions**
    - **Commission stated it would review situation during 2001 and take into account technical and commercial developments**
    - **GSMA urges refrain from intervention**
    - **GSMA filing a response**

  - **Legal Aspects of Roaming**
    - **STIRA notified in 1996 - Comfort letter received**
    - **IOT notified in 1998 - Comfort letter received**
    - **GSMA requested a formal exemption**

GSMA Leadership Activities

- **M-SERVICES**
  - **Difficulties surrounding WAP's widespread adoption and implementation of services**
  - **Desire to benefit consumers through enhanced data service offerings**
  - **GSM community wish to utilise the existing network platforms - WAP, SMS, email**
  - **Objective to ensure multi vendor scenario ensuring competition and choice**
  - **Operators came together in a GSMA task force**
  - **Produced MServices Guidelines; Non binding document which specifies features, functionality and application framework in the GPRS terminal device which operators believe are required to enable successful deployment of M-Services**
  - **Projection is for a minimum of 10 million GPRS devices to be MServices compliant by year end**

GSM Global Roaming Forum-
"where the world comes to roam"

- **Inter-standard Roaming - current 2G initiatives**
  - **GAIT: GSM-TDMA interoperability**
    - **Objective is to have GAIT roaming by December 2001**

  - **Gi: GSM-iDEN interoperability**
    - **Gi roaming has been in commercial deployment since April 2000**
    - **Future work: improving services interoperability, e.g., data, Intelligent Network/CAMEL services**

  - **G95: GSM-CDMA interoperability**
    - **Working presently with SDOs, namely Telecom. Industry Asso'n on terminal and network specifications**
    - **Goal: end of 2002 commercial services**

GGRF Plans for 3G Interoperability

- **<u>Future Objectives</u>**

  - **Establish 2G bridges to 3G**
    - **TDMA to 3GSM**
    - **CDMA to 3GSM**
  - **3G**
    - **3GSM to WCDMA**

- **Technical work: GGRF intends to work closely with 3GPP and 3GPP2 on inter-standard roaming**

- **Commercial and operational work: GGRF to work on standardised procedures and processes to facilitate roaming**

GSMA Leadership Activities

- **Global Regulatory Initiative**

  - **Request from members for GSMA to step up activities and to advise on and help to shape global wireless regulation**

  - **Creation of GSMA Global Regulation & Public Policy Team**

  - **Creation of high level expert group from member companies on Regulatory Advisory Panel**

  - **Interaction with all regional and technical Working Groups**

  - **Several Initiatives- Data Privacy, Spectrum, Self regulation**

Regulatory Initiative - Data Protection

- **Exploration and discussion on creation of set of "umbrella" high level data privacy principles for all GSMA operators**

  - **Ensure that customers can roam with confidence with adequate level of protection**

  - **Inform users about collection of personal information**

  - **Provide access customers to update information held**

  - **Maintain security of personal information**

  - **Limit collection/retention to what is needed**

GSM Association ©

Regulatory Initiative - Spectrum

- **Discussion on current spectrum allocations, methods used, different uses**

    – Phase I: review of issues related to spectrum planning;

        • Second generation matters

        • Third Generation matters

        • Future transition of GSM frequencies to 3GSM/IMT 2000

        • Spectrum for IMT 2000 and beyond

        • Spectrum management issues like trading, fees & charges

        • Frequency issues like Bluetooth

    – Phase 2: fundamental review of spectrum allocation and apportionment between users.

    – Objective to input to ITU and relevant working parties (8F)

Self Regulation

- **Desire by mobile operators to implement self regulatory initiatives in appropriate circumstances**

- **Example today;**

    – **Code of Conduct on Transparency of Roaming Tariffs adopted by European operators**

    – **Involves auditing by external body**

- **GSMA exploring extending it globally**

Summary

- **A seamless, limitless world of verbal and visual mobility communications is within our grasp…**

  – **The GSM family of technologies has been a success due to unparalleled co-operation between industry partners and operators on behalf of the end user**

- **The GSM Association believes our future is indeed a bright one…**

  – **We are confident we can build on GSM successes as we enter the new business cycle by industry co-operation for the benefit of the end user...**

Final Remarks for Consideration by Workshop

- ## Regulatory Principles

  - "Regulators should seek a balance between short term and long term benefits. In general competition is deemed to be a better form of regulation and the regulators need to encourage sustainable competition for the long term".

  - "..European mobile operators have taken on exceptional risks since the launch of the original analogue networks in the early 1980s, through the development of digital technology, and most recently (and most expensively) with 3G licences and the related network spend. It does not seem unreasonable that this degree of risk merits a superior return potential."

  - need "to create the sound investment context the industry needs in view of the increasing initial cost for the implementation of new and innovative services."

Final Remarks for Consideration by Workshop

- ## Regulatory Principles

  - "Regulators need to balance the micro and macro view. For example in isolation, mobile termination charges may appear somewhat excessive to regulators and therefore attract regulatory intervention. However, from a top down perspective, operators are not making excessive returns and indeed- , some may not make an adequate return for many years."

  - "Due to interdependency and divergence of operator returns aggressive regulation (at the retail level) is counter productive to the objectives of the regulator."

  - "Regulators must continue to encourage investment, innovation, and risk taking in the mobile industry. An overly interventionist approach would be likely to stifle such processes with inevitable competitive, economic, and even social consequences."

    - » **Light-handed regulation coupled with competition law**

Final Remarks for Consideration by Workshop
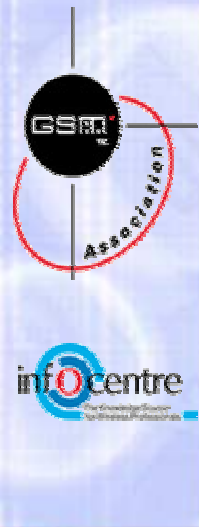
- ## Origin of Quotes

    - ### Merrill Lynch

        – **Report on Vodafone Group, August 30, 2001**

    - ### Lehmann Brothers

        – **Report on Mobile Regulation, August 17, 2001**

    - ### Erkki Liikaanen

        – **Commissioner, Information Society Directorate General**

THANK YOU FOR YOUR ATTENTION.