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Regional Workshop on
**Internet
Governance**

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The future development
of the

Internet

and the need to review its

Governance

The future of the Internet and the need to review its Governance

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The current Internet is based on IP –
but future IP-based networks will be
different
in terms of
technology
and regulation.

Technology



NGNs* are **multi-purpose** tele-
communication networks **converging**
voice, picture and data services over both
fixed and mobile networks.

This holds for both public and enterprise
networks, where also **convergence** in terms
of seamless usage of **applications** will take
place.

* NGNs = Next Generation Networks

Next Generation Networks

are an **evolution** from PSTN- and IP-networks to a **unified public network** for electronic communications based on IP. While regulation of **today** is focused on **voice services**, regulatory approaches of the **future** must deal deal with **electronic communications** in a broader sense.



Multiservice networks need

harmonised interfaces and defined protocols, whereby standardisation should remain a market-driven process. We prefer international/global standards to support global markets.

Requirements for Next Generation Networks

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**High reliability,
high network integrity,
and high availability**

**Guaranteed Quality of Service
(more than best effort must be offered)**

**Safety and security
(comprises access to data and services,
user authentication, data integrity,
confidentiality)**

Key Challenges for Next Generation Networks

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- Data protection and privacy
- Legitimate interests of states
- Emergency calls: access to caller location
- Carrier (pre-)selection and interconnection
- Unique numbering, number allocation
- Directories
- Affordable access for disabled persons

Towards a definition of the
**Next Generation
Network**

and its implications

for the future of

Internet

Governance

Definition of Next Generation Network

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“A Next Generation Network (NGN) is a packet-based network able to provide services including Telecommunication Services and able to make use of multiple broadband, QoS-enabled transport technologies and in which service-related functions are independent from underlying transport-related technologies. It offers unrestricted access by users to different service providers. It supports generalized mobility which will allow consistent and ubiquitous provision of services to users.”

Source: ITU-T (SG 13)

Fundamental Characteristics of Next Generation Networks

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- Packet-based transfer
- Separation of control functions among bearer capabilities, call/session, and application/ service
- Decoupling of service provision from network, and provision of open interfaces
- Support for a wide range of services, applications and mechanisms based on service building blocks (including real time/ streaming/ non-real time services and multi-media)
- Broadband capabilities with end-to-end QoS and transparency
- Interworking with legacy networks via open interfaces

Fundamental Characteristics of Next Generation Networks

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- Generalized mobility
- Unrestricted access by users to different service providers
- A variety of identification schemes which can be resolved to IP addresses for the purposes of routing in IP networks
- Unified service characteristics for the same service as perceived by the user
- Converged services between Fixed/Mobile
- Independence of service-related functions from underlying transport technologies
- Compliant with all regulatory requirements, for example concerning emergency communications and security/privacy, etc.

What kind of
**Regulatory
Framework?**

Regulation

- We need to design a new regulatory framework that is future-proof, i.e. is able to withstand the test of time.
- When we try to peek into the future, we can choose between 3 different approaches:
 1. Look into the past at previous developments
 2. Look at the present and current challenges
 3. Look at the dynamics

1. Looking into past developments

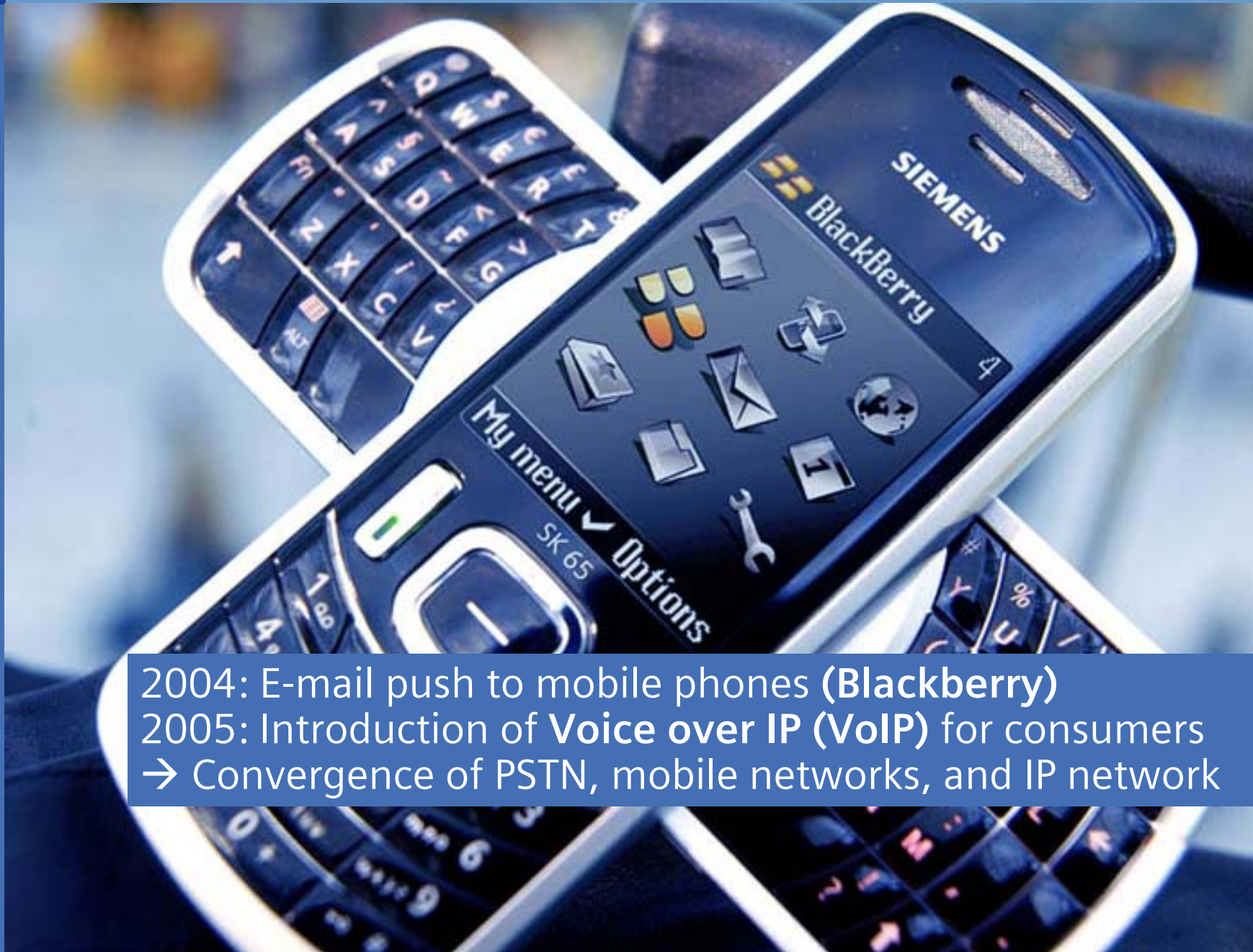
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- 1993: Xmosaic browser / Web server for multimedia content
-> great success / "killer application"
- 1994: CU-SeeMe voice/video conferencing via Internet
-> niche application with limited success

2. Look at present challenges

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2004: E-mail push to mobile phones (**Blackberry**)
2005: Introduction of **Voice over IP (VoIP)** for consumers
→ Convergence of PSTN, mobile networks, and IP network

3. Look at the dynamics

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- Exponential growth in user adoption
- Experimentation on the ground: try first, ask later (RFC)
- Technical innovation leading to constant stream of new products, processes, and services

How do we want the
Future
of the
Internet
to develop?

Future Scenarios for the Next Generation Network

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- ⊕ Free speech
- ⊕ Right to information
- ⊕ Right to access
- ⊕ Innovation
- ⊕ Economic development

- ⊕ Protection of minors
- ⊕ Promotion of local culture and customs
- ⊕ Filtering of spam

**mostly
free**

**strongly
regulated**

- ⊖ Virus
- ⊖ Spam
- ⊖ Hacker

- ⊖ Licensing required
- ⊖ Activities illegal if not
- ⊖ High license fees
- ⊖ Lack of market entry
- ⊖ Reduced competition

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But the question is:

Who is there **to decide,**
where to draw **the line?**

Summary:

Recommen- dations



- It is better to err on the side of freedom, i.e. don't over-regulate
- Use existing mechanisms instead of choking economic development
- Formally de-regulate, setting out principles and guidelines

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How to win or loose

Business and Investment



How much regulation?

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If you over-regulate

If you regulate too harshly, you may lose business to other regions or countries

If you don't regulate

... then you create uncertainty
and you can still lose business to others

If you do it right

If you apply transparent, light, sensible regulation, you may attract business

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**Thank you
for your attention!**

Global network of innovation