



**ITU WSIS Thematic Meeting on Cybersecurity**  
**ITU Headquarters, Geneva, Switzerland**  
**Sessions 13-14: Harmonizing National Legal Approaches**  
**and International Legal Coordination**  
**30 July 2005**

# International Cooperation for the Protection of NGN Public Network Infrastructure

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# Topics

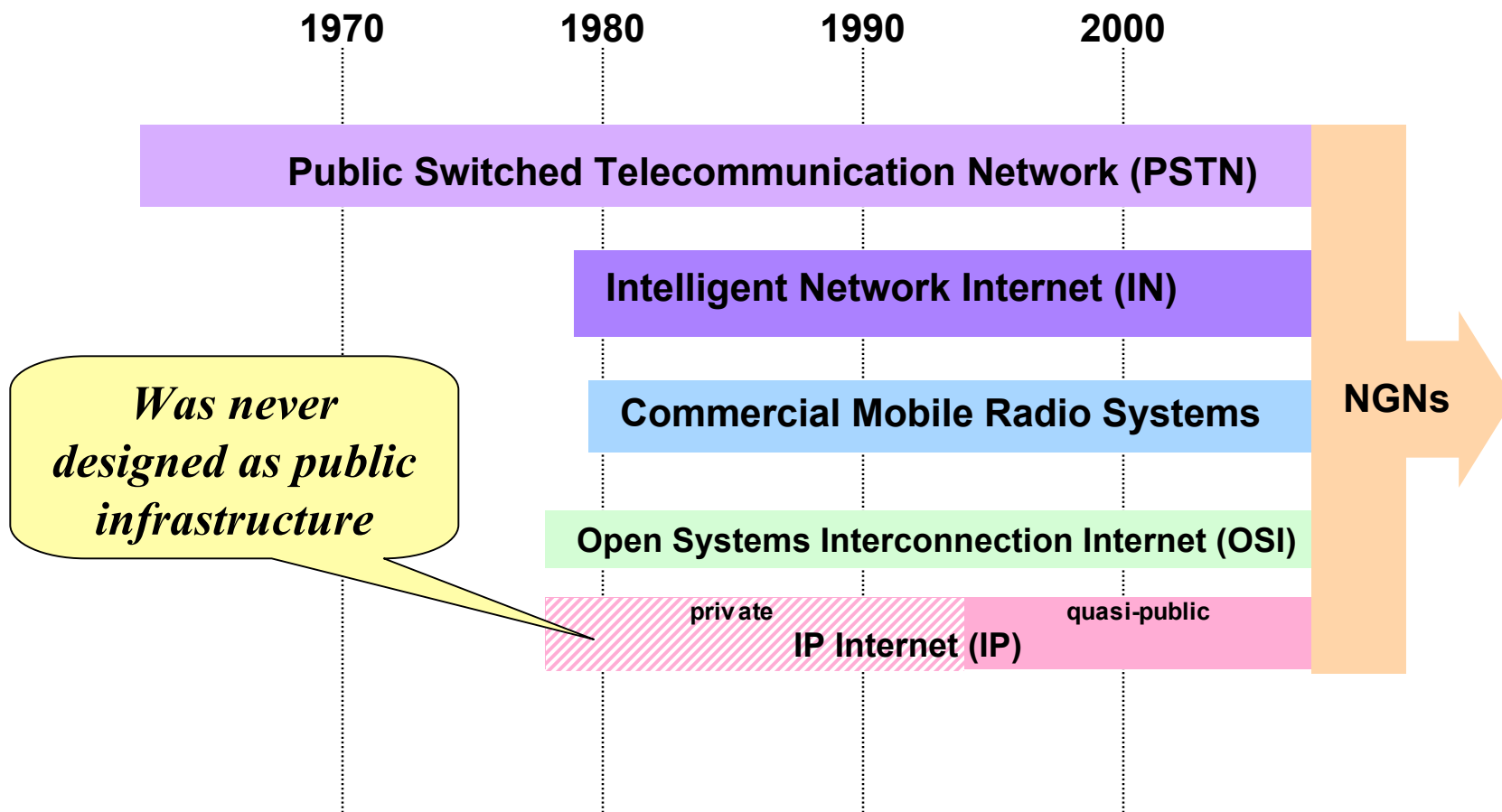
- Next Generation Networks
- Protecting public network infrastructure
- Basic requirements
- Legal basis for cooperation
- Communities
- Cooperative activity
- Next Steps



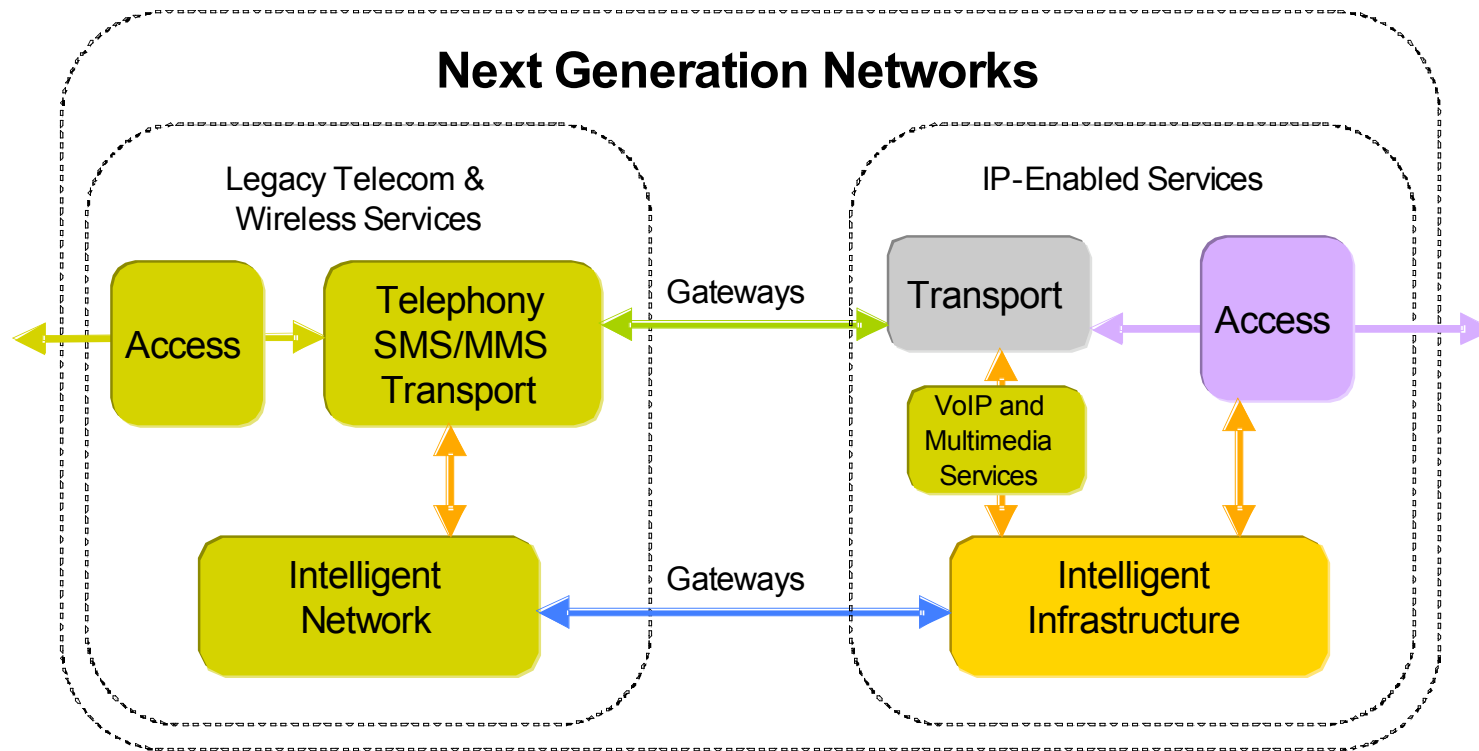
# Next Generation Networks

**Nationwide and  
Worldwide  
Open  
IP-enabled  
Public Network Infrastructure  
for Communications,  
Commerce and  
Content  
for Always-On, Nomadic  
People and  
Objects**

# NGN – Long-Term Network Convergence Perspective



# NGN – Near-Term Network Convergence Perspective





# Protecting public network infrastructure

- Responsibility for national public infrastructure
  - rests with designated governmental authorities
  - coordinated through intergovernmental treaties and mechanisms
- National public infrastructures have special properties
  - the public and the nation depend on these infrastructures
  - the consequences of their failure are profound
- All governments impose capability requirements on public infrastructures
- Global service innovation and marketplace competition are necessary collateral
- Pervasive vulnerabilities are potentially emerging in the public communications network infrastructure and not well understood
  - Rapid introduction of new technologies, especially platforms not designed for public infrastructure use
  - Open public communication network infrastructure
  - Nomadic users and providers
  - Uncontrolled access devices and capabilities
  - Growing cybercrime and potential terrorism actions

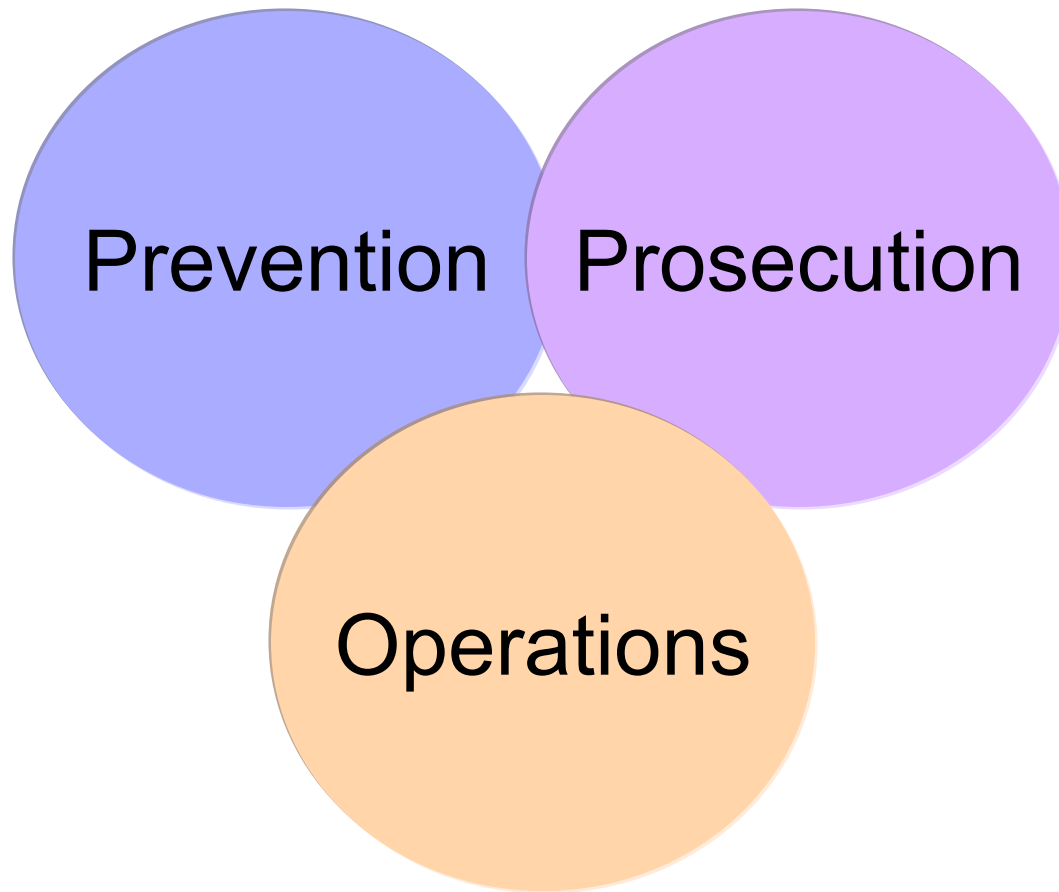


# Requirements for infrastructure protection

- Prevention: understand and reduce vulnerabilities
  - Design
  - Administer
- Operations: respond to failures and attack
  - Monitor
  - Analyze
  - Incident response
- Prosecution: facilitate forensic evidence for law enforcement
  - Procedures
  - Access
  - Sharing
  - Proceedings



# Protection Ecosystem







# Legal basis for cooperation

## ■ Prevention capability

- International Telecommunication Regulations - originally crafted as core “protective” internet instrument for meeting infrastructure protection and other public requirements, especially Art. 9.1b

## ■ Operations capability

- No present explicit legal basis for cooperation
- Some emerging national law, e.g., FCC/DHS Outage Reporting Rules

## ■ Prosecution capability

- Cybercrime Convention – crafted as a post hoc internet instrument for dealing with the inability to prevent
- MLATs



# Communities

- Prevention capability
  - Telecom regulatory authorities
  - Standards bodies
- Operations capability
  - FIRST and CERTS
  - Regulatory/homeland security authorities
  - Commercial bilateral agreements
- Prosecution capability
  - International law enforcement bodies
  - Justice ministries
  - National laboratories and forensic facilities
  - Local law enforcement

Cybersecurity Directors



# Cooperative Activity

- **Prevention capability**
  - Standards specifications
  - Administrative arrangements
  - Information sharing
- **Operations capability**
  - Standards specifications
  - Operations arrangements
  - Analysis and response capabilities
  - Information sharing
- **Prosecution capability**
  - Standards specifications
  - Procedural arrangements
  - Information sharing



# Next Steps

- Implement the Atlanta Declaration
  - Collaborate on NGN regulatory models and requirements – especially those which have transnational implications
  - Enhance international institutional arrangements for protecting public NGN infrastructure
    - Establish international arrangements for an infrastructure protection operations organization
    - Ratify Convention on Cybercrime + expansion + secretariat
- Implement NGN core infrastructure protection capabilities now
  - Trusted ability to identify, authenticate, and contact
    - NGN providers
    - NGN subscribers
  - Rapid, trusted resolution of geographically autonomous identifiers for communications, commerce, and content