Outline

• Let me tell you about GISFI security & privacy working group
• Few words on cyber security
• Cyber security and what to do
• Mobile network and cyber security
• Something like conclusion
GISFI Security & Privacy Working Group

• Currently the main focus is on telecom network security testing

• This work item is based on Indian government requirements for security testing of mobile networks and network elements

• Other activities that have been discussed on and off
  – Unsolicited communication
  – Cyber world and children
  – Identity management
  – etc.
Available GISFI Deliverables

• GISFI TR SP.100 V1.0.0 Requirements Study on Circular titled “10-15/2011-AS.III/(21)”, dated 31/05/2011
• GISFI TR SP.101 V1.0.0 Telecom Security Framework Proposal for India
• draft GISFI TR SP.102 V1.0.0 (Telecom Security) Policy Study and Proposals
• GISFI TR SP.103 V1.0.0 Security in mobile communication systems; Comparison and proposals for India
• draft GISFI TR SP.104 V1.0.0 Monitoring
• GISFI TR SP.105 V1.0.0 Security Testing Methods for ICT products
• GISFI TR SP.106 V1.0.0 Element Selection Guideline for Network Equipment Security Testing
• GISFI TS SP.1xx V1.0.0 Guide to Related TSes
• draft GISFI TS SP.1xx V1.0.0 Telecom Security Framework Proposal for India
• draft GISFI TS SP.1xx V1.0.0 Security Testing, eNodeB
• draft GISFI TS SP.1xx V1.0.0 Security Testing, GSM
• draft GISFI TS SP.1xx V1.0.0 Security Testing, GPRS
Cyber Attacks!

• Special 26
  – Akshay Kumar, Anupam Kher
    • Thief rides over the trusted traffic becomes part of the CBI system
      – Thief had created a trustable profile
    • From inside they ride on the trusted traffic to the place they want to attack
    • Wipe out everything and delete all traces

• James Bond 007, Skyfall
  – Insider attack
  – Attack on critical infrastructure

Cyber attacks making path to movies globally ;0)
What is cyber security (threat)?

• Tough question
  – Cyber world to everyone is a cloud where there are different things – including your PC
  – Sometimes “things” get attacked leading to attack in physical world and we feel afraid

• Example of cyber world and attacks
  – Your PC webcam accessible by anyone
  – Ransomware pay or odd material in PC exposed
What to do about cyber security?

• Why
  – Attacker over safe path – you accessed thus it should be OK
  – It is anyhow behaviour of the software
  – Certain behaviour is considered “trusted” (??)

• What to do
  – Protect access, e.g. camera
  – Protect information, e.g. odd material?

No more perimeter! Important, priority, secure
Mobile Network

• Network: IP based
• Network elements: PC type
• Protocols: Application on top
• Mobile devices: PCs
• Cyber security issues?: Could be similar to IP & PC

IP based and other attacks possible
Mobile Network

• What would I do:
  – Usual stuff (is it so for you?):
    • External protection using usual stuff: firewall
    • Per device protection: authorization, authentication, logging, hardening…
    • Interface protection
    • Anti-virus, malware protection etc.
  – Monitor odd behaviour (inside device and network) – traffic going to unexpected destination? access from source not expected? access on unexpected time? trace path…

Do usual stuff and “monitor with intelligence”
Cyber security policy?

- Recommendation:
  - Define penalty, example:
    - Threaten a child and you will live life of fear and harassment
    - Attack a child and your thinking ability will not exist
  - Educate!
    - How many of you have discussed about the dog in Internet with your kids?
- Prepare recommendations for
  - Secure network design and deployment
  - Individuals on means to secure
- Define responsibilities
- Deploy monitoring
- Train people including enforcement team

This is a complex task and stepwise work in collaboration is necessary.
Cyber Security: GISFI Security & Privacy WG Proposal

• Cyber security program
  – Policy
  – Education
  – Recommendations
  – Technical solutions development
  – ITU input

• Call to work together: GISFI, ARIB and TTC
Take-Away

• Start with that assumption that you are compromised
• Start with security from the very beginning and watch for security issues continuously
• Basic security methods and policies must be applied to mobile networks
• We propose a cyber security related project between GISFI, India, and TTC/ARIB, Japan