

Secure Wireless Communication

IP standard in mission critical applications

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Presentation Contents

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- 3. Integration and Extendability*



Background

User Driven Development

★ Sources of knowledge

- ★ Visits to real communication/operational centers
- ★ Work of User Group driven by British APCO
- ★ Information exchange analysis by Qinetiq
- ★ Study of working documents and whitepapers

★ User requirements ANALYSIS

1. Requested Functionalities
2. Wished Devices
3. Necessary Connectivity
4. Systems in Use and Possible Extensions

SECRICOM vision

1. Technologies supporting performance of emergency responders
 - ★ Comfortable use and cost effectiveness also in daily operations
 - ★ Exploiting new trends - Features / Devices
2. Technologies seamlessly usable
 - ★ Cross-border cooperation
 - ★ Inter-agency cooperation
3. Technologies easy to operate and devices suitable for the job
 - ★ Many actors involved during emergency response
 - ★ Not all of them need radios (or are comfortable with them)
4. Security as integral part

**Reuse already
made investments**

Feature rich

Intuitive to users

Ideal device loved by users?

Fitting with Crisis Communication visions

Affordable system

**Integrated with
existing systems**

Mobile Phones of Today- SmartPhones



IP-based communication solution For mobile phones and beyond

★ Internet Protocol

- ★ The most popular devices and operating systems are supported including mobile phones of today
- ★ Is not only about connection to Internet, but it is a set of ICT standards
- ★ Used also in non-internet network connections

★ Is a common standard allowing:

- ★ Flexible development
- ★ Interfacing various devices / services
- ★ High-level security for reasonable price



SECRICOM Silentel

Capabilities Developed

Secricom Silentel architecture

★ Silentel Communication Server

- ★ secure switching center module interconnecting all users of system

★ Silentel Certification Authority

- ★ module for Server and Users certification creation, validation and revocation (user can use his own CA as well)

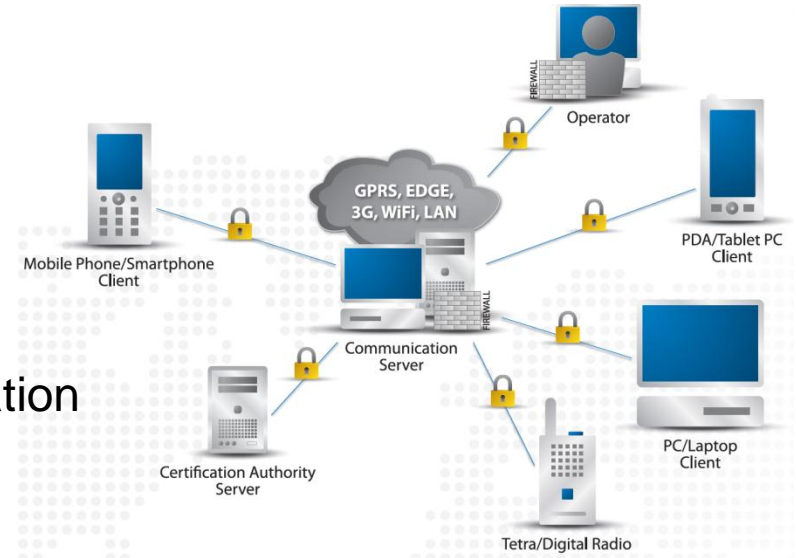
★ Silentel Operator Studio

- ★ user account management and personal contact list definition

★ End-user applications

- ★ Various devices

★ Gateways to external systems



SECRICOM Silentel - Security Aspects

★ User authentication and management

- ★ Unique user name and password / Gridcard
- ★ Smart card (microSD) and PIN (electronic signature)
- ★ Operator managing rights, groups and visibility of clients

★ Communication encryption

- ★ Modular design, encryption modules are replaceable by user
- ★ Key exchange STS protocol
- ★ AES256 encryption

=>>> **Certified as NATO Confidential**

- ★ NATO product catalogue
- ★ On/going certification
in number of EU countries

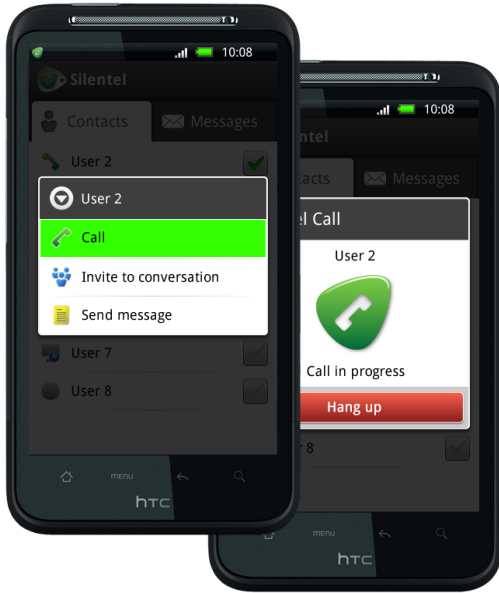




Voice Services

★ One-to-One

- ★ Full duplex call = encrypted “phone” call
- ★ USE: Call of “Gold” to “Silver” officer



★ One-to-Many

- ★ Half duplex = PTT
- ★ In groups of Bronze / Inter agency
- ★ Between Silver and Bronze officials
- ★ USE: Press-to-Talk with Tetra radios





Text Services



★ Instant Messaging

- ★ Text chat by group of users
- ★ USE: Correct name spelling

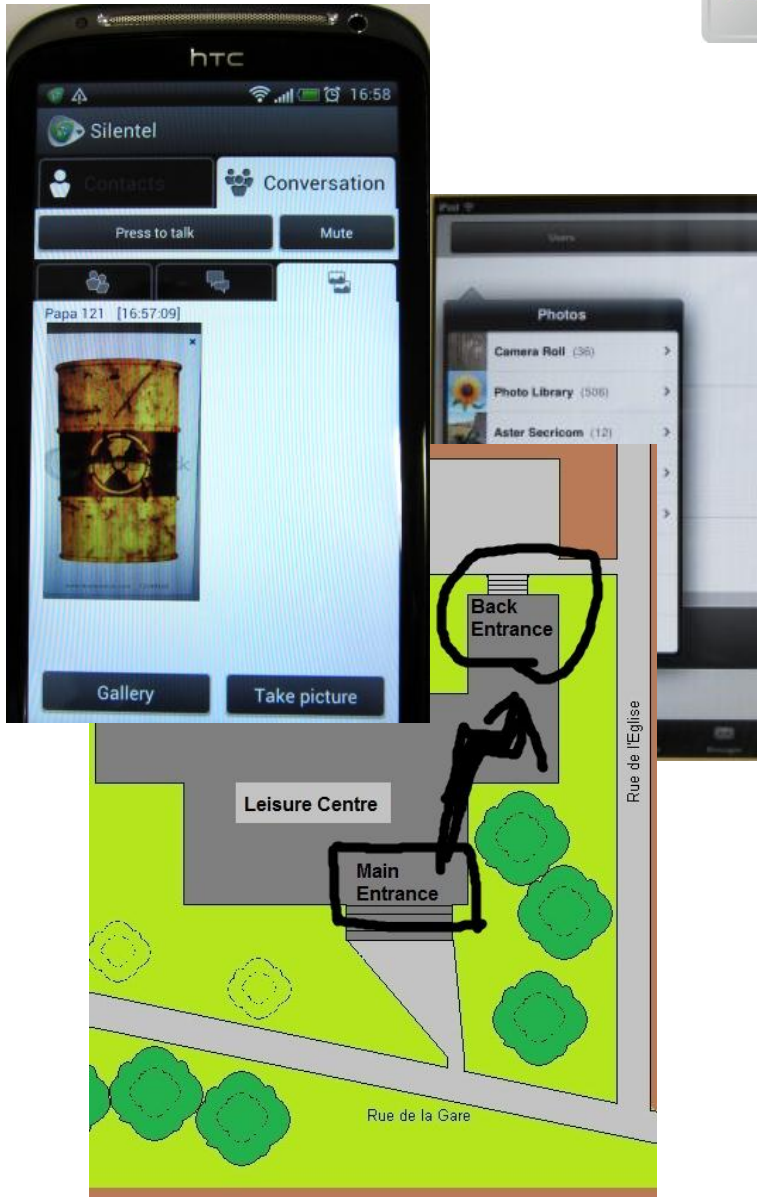


★ Long messages

- ★ Up to 1000 characters
- ★ Delivery and Read receipt
- ★ Audit trail - responsibility
- ★ USE: Expert advice



Images & Data



★ Images

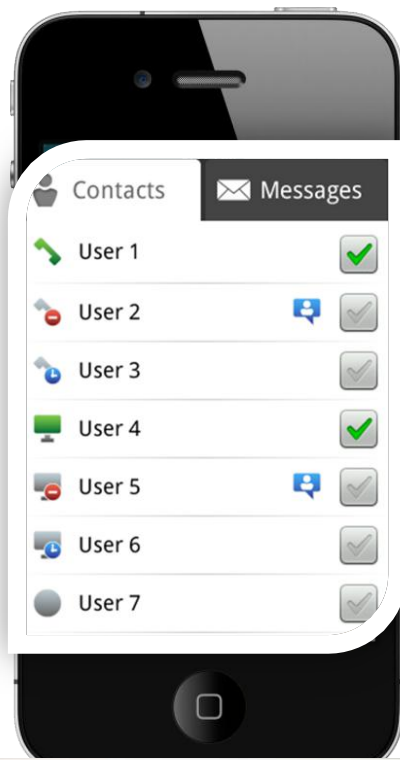
- ★ Saved / Taken by camera
- ★ USE: Hazardous barrel picture

★ Hand Drawings

- ★ On blank canvas
- ★ Over saved images
- ★ USE: Sketch a map

★ File Transfer

- ★ Attach a file to message
- ★ USE: PDF, etc.



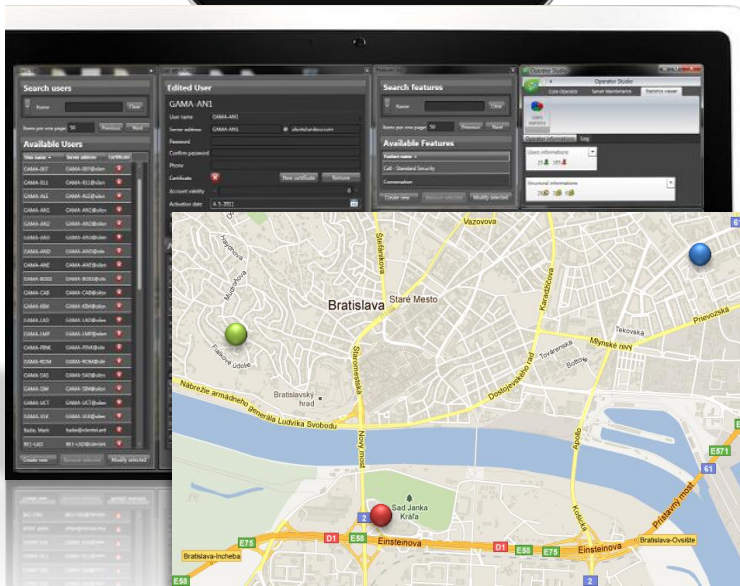
List Services

★ User status

- ★ Status of resources
- ★ Online / Offline / Available / etc.
- ★ USE: Availability of units

★ Secured Contact List

- ★ Protected inside application
- ★ Separated from SIM and phone



★ GPS Positioning

- ★ Location of forces
- ★ Managed by Operator
- ★ USE: Call the closest

Application Availability to Users

★ Various Platforms



★ Various Devices

★ Mobile phones

★ Tablet PCs

★ Touchscreens

★ PCs / Laptops



SECRICOM Silentel Connectivity

- ★ Any data service available
 - ★ GPRS / 3G / LTE / WiFi / LAN
 - ★ Seamless connection thanks to MBR

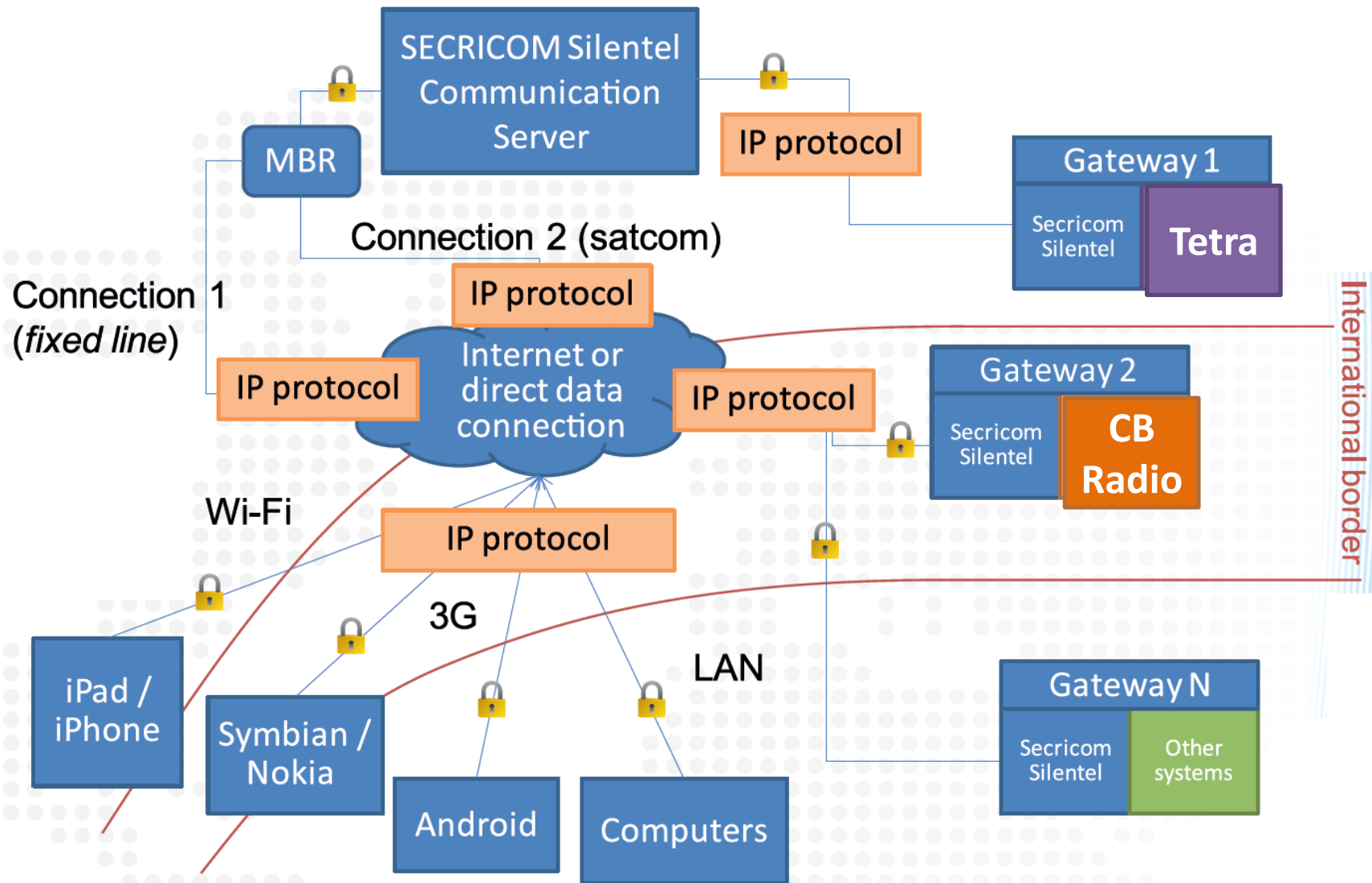
- ★ Extendable network – SECRICOM Nomadic Node
 - ★ 5-minute video of NN in the lobby
 - ★ Mobile and Easy to Transport
 - ★ Deployable in Field ~30 minutes
 - ★ Secure Communication Server
 - ★ Enhanced Connectivity
 - ★ Power Independent



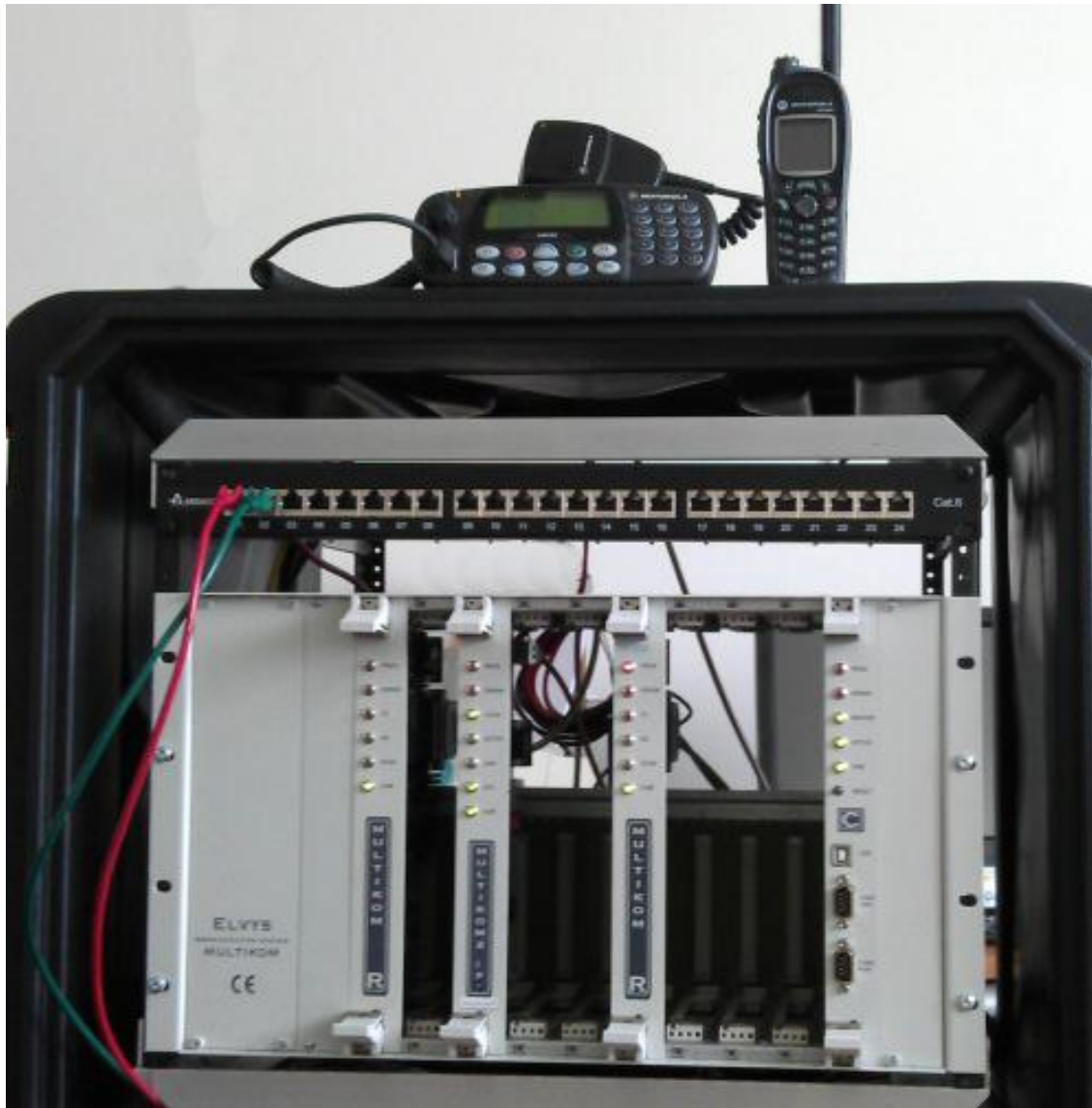


Integration and Extendability

Integration with state of the art



Gateway to Tetra Radio



Gateway to CB / Digital Radio



What does it mean?

- ★ World „outside“ radios can be involved in emergency response
- ★ More actors cooperating

Example:

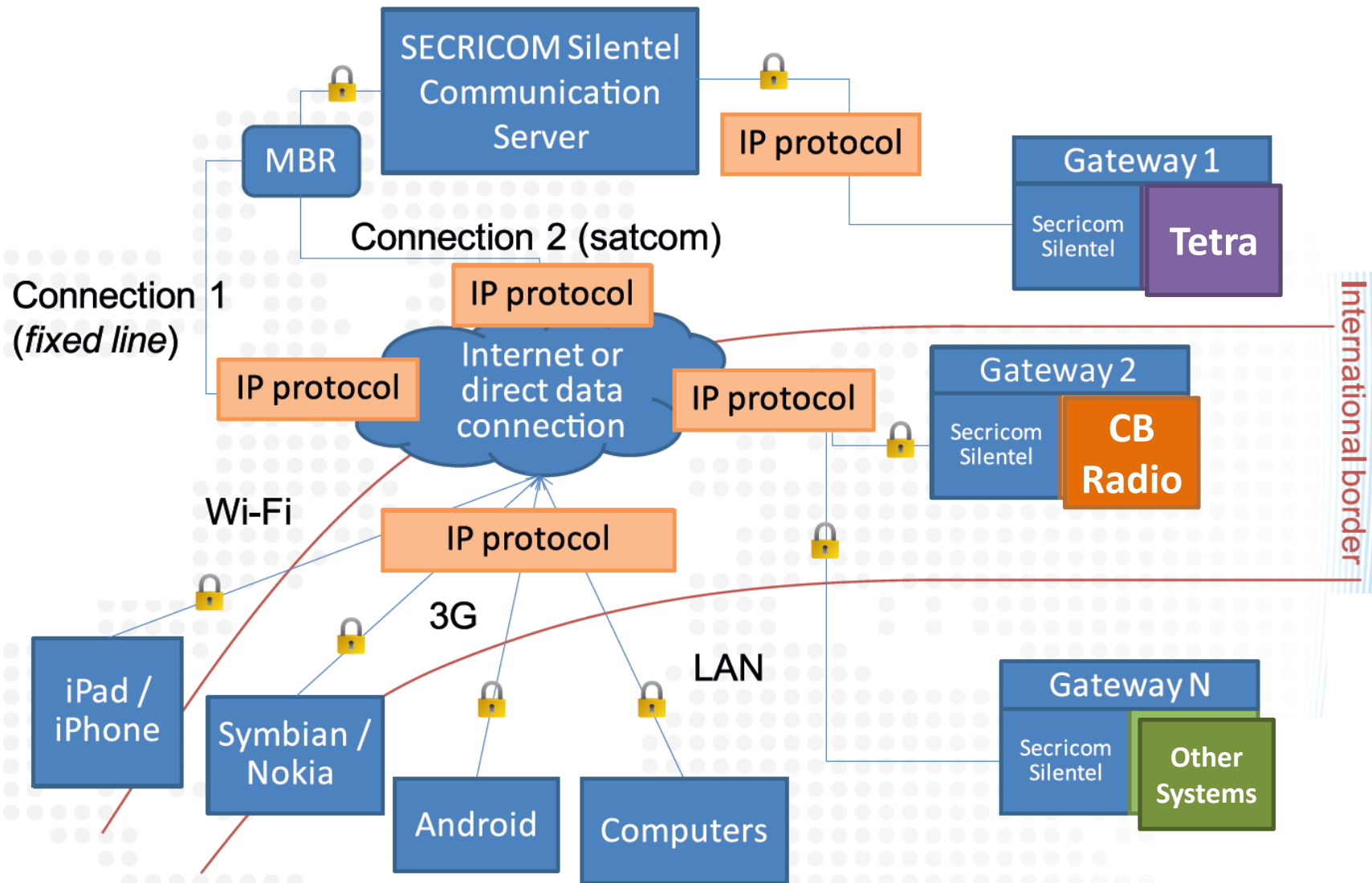
- ★ *Mayor of a town can **be in one communication group** with Fire/Police/Ambulance*



Silentel - Examples of Use

- ★ Cross-Border Cooperation
 - ★ Cross-agency
 - ★ Cross-frontier
- ★ Natural Disasters
 - ★ Floods
 - ★ Forest fires
- ★ Industrial Incidents
 - ★ Chemical factory explosion
 - ★ Transport incidents in inhabited areas
- ★ Mass Meetings and Activities
 - ★ Sport events
 - ★ Religious meetings
 - ★ Culture events – festivals, concerts, etc.

Extendability



Integration with other SECRIком technologies

★ Smart agents

- ★ Access to various database data
- ★ Usable in search of resources (hospital beds)

★ Trusted docking module

- ★ Advanced security functions

★ Network services

- ★ Multi Bearere Router
- ★ Network monitoring centre

