New Business Models for Public Wi-Fi Services

Connecting public sector organizations, private companies and homes

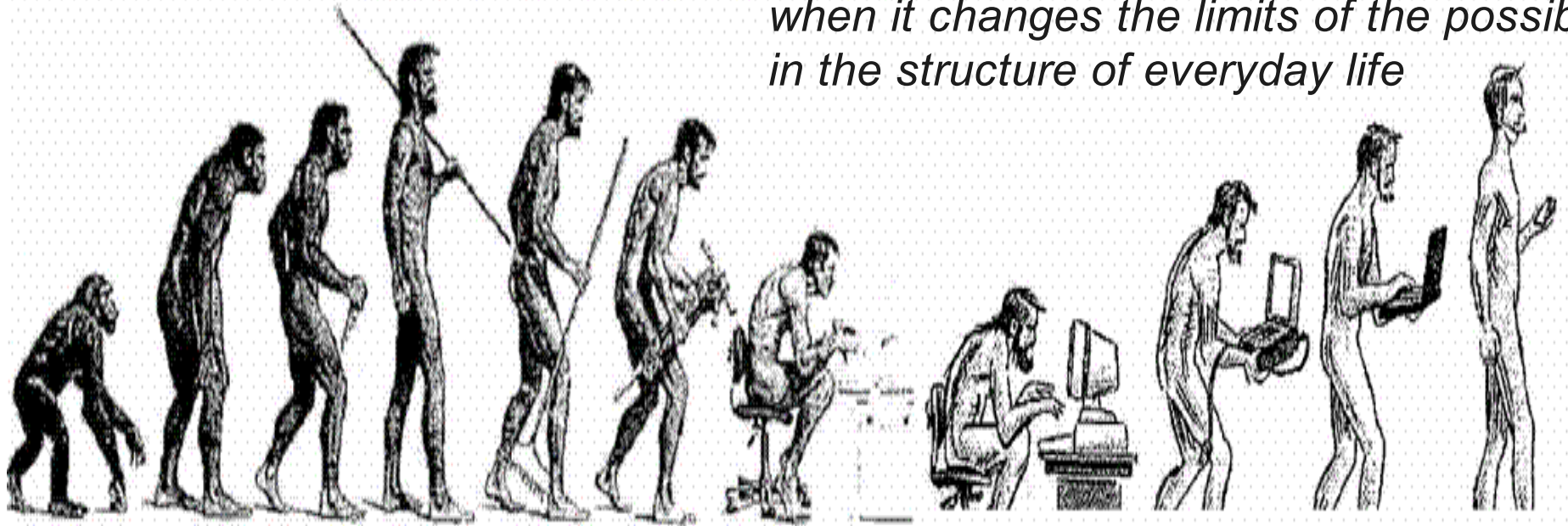*ict* TURKU

Finland

Jaakko Kuosmanen 2006

Braudel Rule:
freedom becomes value
when it changes the limits of the possible
in the structure of everyday life

Functionality = Internet services and content

- Mobile Office (office functionality everywhere)
- Personal Information Management: email, calendar, contacts, tasks
- VoIP, laptop videoconferencing, WebTV, WebRadio,...
- GIS, other services and content

Value of an Internet service = autarchy value + synchronization value
- Autarchy value = the value of the service when you use it alone
- Syncronization value = the value of that others use the same service

Network effect = sync value grows exponentially to the number of users
Notice: gatekeeper is the killer of the network effect

The Internet is a **scale free network** (Albert, Barabasi et al 1999) which is the most efficient type of network for the diffusion of ideas (Vespignani 2004)
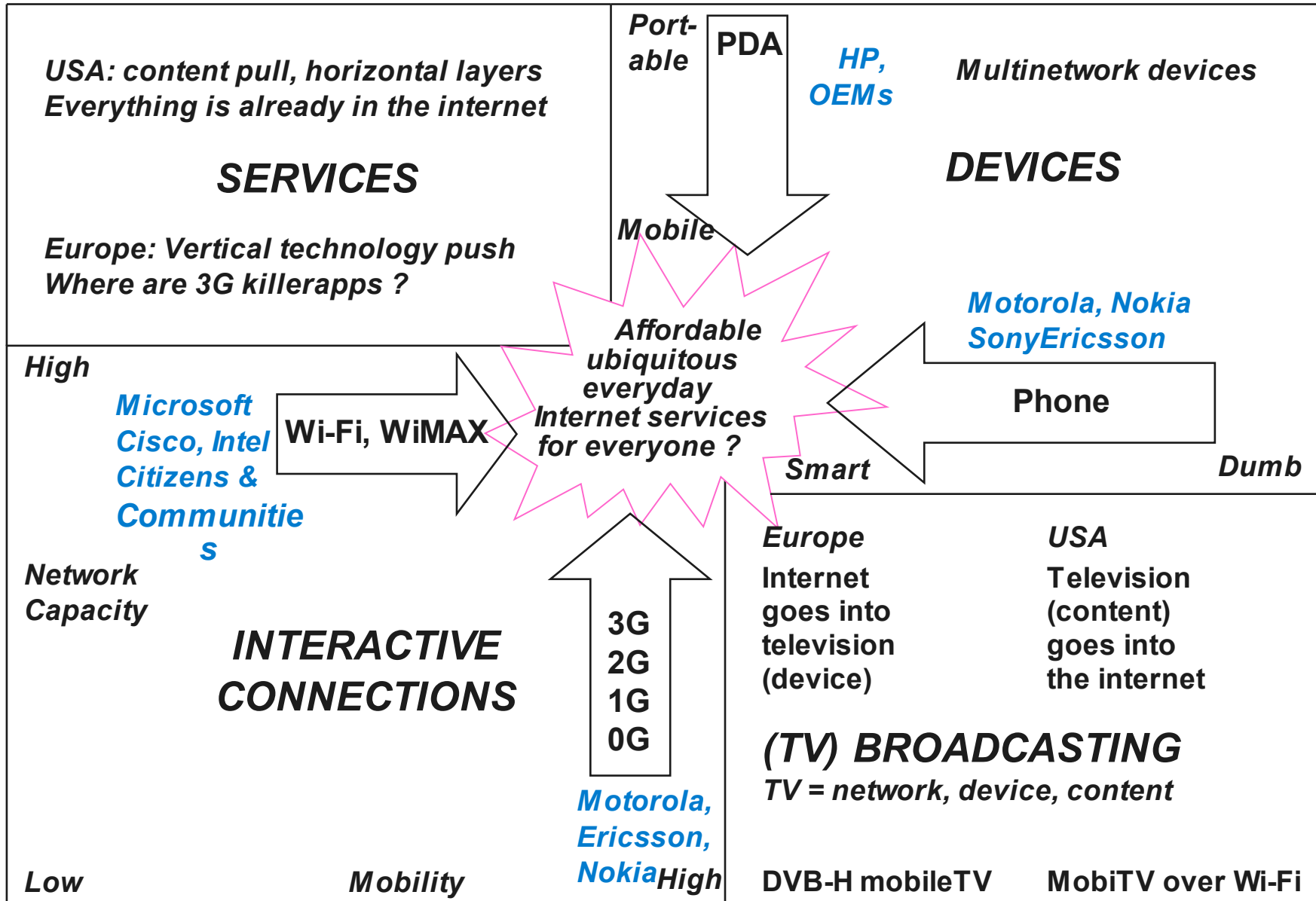
Brickstones:
- Content
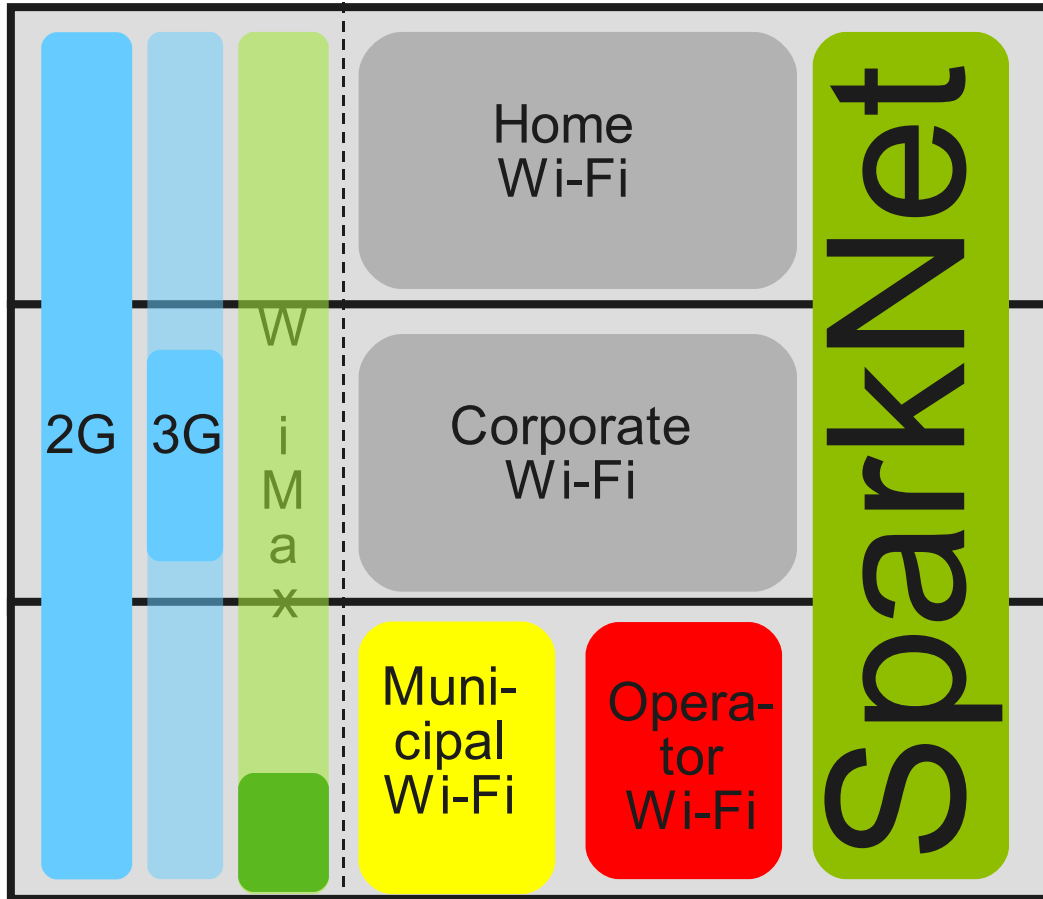- Services

INTERNET (IP network)
- Connections
- Devices

We don't need 3G-, Wi-Fi- or ADSL-services,
But digital services = Internet services
And Internet-connections (3G, Wi-Fi, ADSL...)

Acid test: users (for exaple students) should be able to use Internet-connection at home, at work and in public places as much as 5 hours daily

Internet services everywhere – mobile Internet

USA: content pull, horizontal layers
Everything is already in the internet

SERVICES

Europe: Vertical technology push
Where are 3G killerapps ?

Port-able **PDA** **HP, OEMs** **Multinetwork devices**

DEVICES

Mobile

Affordable ubiquitous everyday Internet services for everyone ?

Motorola, Nokia SonyEricsson

High

Microsoft Cisco, Intel Citizens & Communities

Wi-Fi, WiMAX

Phone

Smart **Dumb**

Network Capacity

INTERACTIVE CONNECTIONS

3G 2G 1G 0G

Europe Internet goes into television (device)

USA Television (content) goes into the internet

(TV) BROADCASTING

TV = network, device, content

Motorola, Ericsson, Nokia

Low **Mobility** **High** **DVB-H mobileTV** **MobiTV over Wi-Fi**

Infrastructure for ubiquitous digital services

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SC**IE**NCE PARK

Three places		Business models
1. Place - home	Home Wi-Fi	SparkNet FON No biz
2. Place - office	2G 3G WiMax Corporate Wi-Fi	SparkNet No biz
3. Place - public places	Muni-cipal Wi-Fi — Opera-tor Wi-Fi	SparkNet MuniWi-Fi Telco Wi-Fi The Cloud

SparkNet

Three places

- **Slower**
- **More expensive**
- **Licenced**

- **Faster**
- **More affordable**
- **Unlicenced**

Business models

Affordable Internet everywhere for everyone

Co-operation

-> affordable

Visitor networks

Home ↔ Office ↔ Other places

-> for everyone

Wi-Fi

Connections   Connections

-> to everywhere

Broadband

-> to every point

Internet

Internet

-> Internet

Services

Internet services and content

-> Services and content

SparkNet – World Wide Wi-Fi
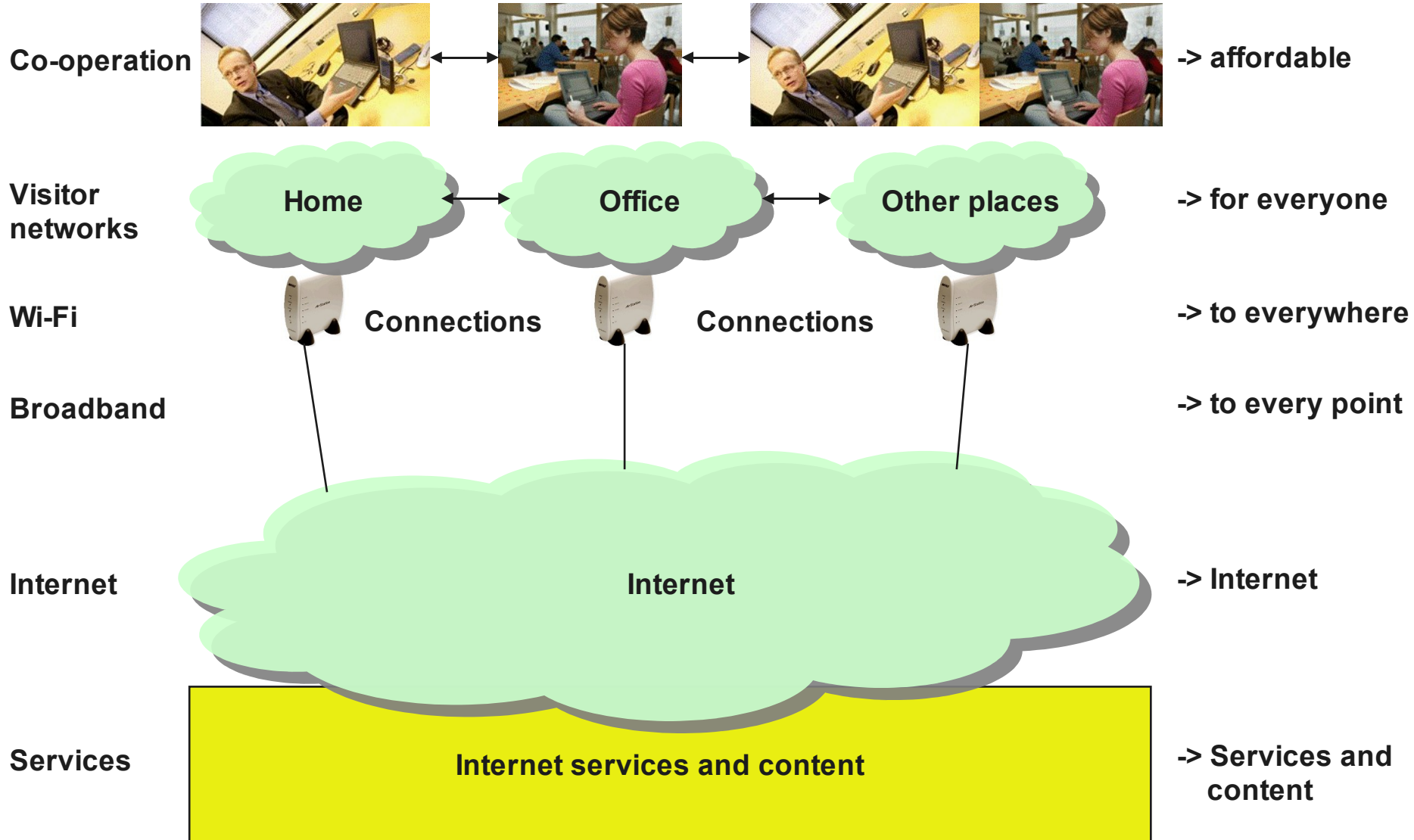
Goal: Affordable Internet everywhere for everyone

Benefits: Infrastructure for development and use of digital services

Costs: Authentication server 2 k€, OpenSpark router 95 €

Size: 2.000+ hot spots, 100.000+ registered users, 700+ networks

Capasity: Access 2.000 * 54 Mb/s , Internet c. 10 Gb/s

Prizes: Productive Idea 2004, Stockholm Challenge finalist 2006, Baltic Challenge winner 2006 (ICT action of the year 2006)
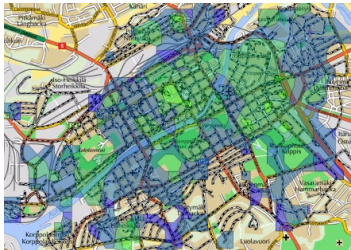
City of Turku
-> TScP
-> **ICT Turku**

UTU ÅAU TSE TUAS

Spark campusnetwork

MP-

Broadband
operators
Vendors

Master

Planet

Spark muniWi-Fi (20+)

Public places

Spark visitor networks (200+)

Offices

SparkNet home networks (1000+)

Homes

Tuottava € Idea

Finalist 2006
Stockholm Challenge
www.stockholmchallenge.se

BALTIC.CHALLENGE

E.G. Turku Airport + Nokia E61 + Suomen Puhelin Phonet + OpenSpark

SparkNet components

Internet	**Authentication**	**Connection**	**Access points**
• New	• AGW1-server (2 t€)	• VLAN	• Shared
• Existing	• AGW2-server (100 €)	• Cables	• Dedicated
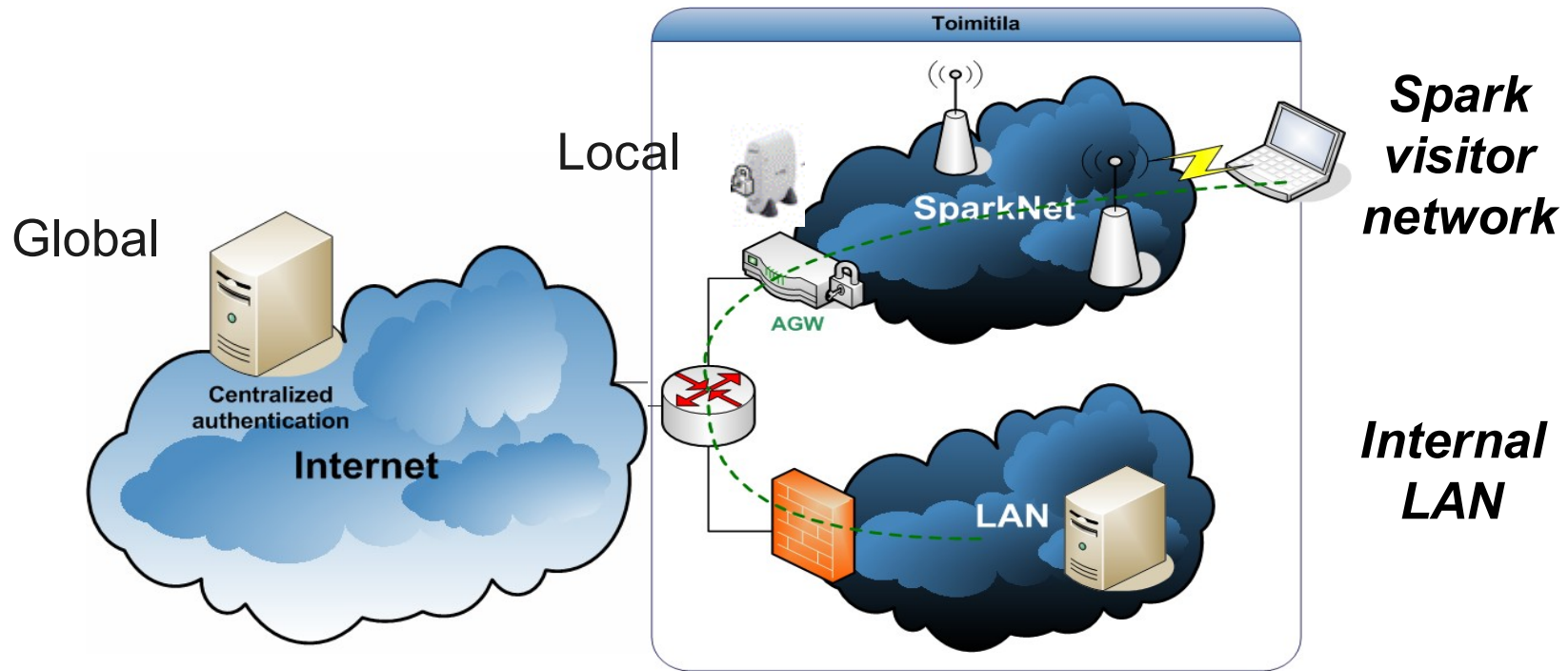
Accessing SparkNet:
- Buy subscription (1.90 €/h)
- Participate in building of Information Society, OpenSpark community
- Host offers connection for his guests

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