

Introduction to Wireless Part I

2000-: It is a OUR big time for wireless!

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Goal

**What are we
doing here
training
about wireless?**

Or... Goal

Why **we** were not doing this
before?

A trip of 25 years

1980 - 2005

1980-

Once upon a time ...

- **Access to technology:**
Military/Research computing
- **Standards:** Communication protocols were secret
- **Regulation:** One Telecommunication Operator/Country
- **Code:** Proprietary Software

Once upon a time ...

- Access to technology
 - Computers = Calculators
 - Computers = Sorting/Ordenador
 - Computers = Weapons
- Mathematics, Accounting, Military
Research, \$, Defence

Once upon a time ...

- Standards
 - What for?
 - Keeping things secret = secure
 - Mine is best, i do not want to talk to you!

Once upon a time ...

- Regulations
 - You are not allowed!
 - National security! Monopoly of access to technology
 - Law vs Technology Cycles

Once upon a time ...

- Code
 - Keep code secret
 - Licence the code
 - Keep your knowledge, keep your status!

1980-1990

1980-1990

- Personal Computing
- Capability of exchanging physical parts
- Capability to move data
- Capability of sharing data
- Tapes (Audio), Telephone Lines (Mo-Dem), FIDO/BBS

1980-1990

- Access to technology++
- First Communication Standards (Close but standards...)
- First data specific regulations
- Code is M\$

1990-2000

Something called Internet

Federal Networking Council (DoD, NASA et al),
Internet Monthly Reports, October 1995 agrees
that the Internet is a system:

is **logically linked together by a globally unique address** space based on the Internet Protocol (IP) or its subsequent extensions/follow-ons;

is **able to support communications using** the Transmission Control Protocol/Internet Protocol (**TCP/IP**) suite or its subsequent extensions/follow-ons, and/or other IP-compatible protocols; and

provides, uses or **makes accessible, either publicly or privately, high level services** layered on the communications and related infrastructure described herein.

Something called Internet (2)

The **Internet** is a group of interconnected networks which has evolved more-or-less independently of any social, political, or governmental control.

The **Internet** is a network of networks - billions of computers, all connected together. The **Internet** is the internet of networks.

Something called Internet (3)

Humanities and Arts: Sharing Center Stage on the Internet, IETF RFC2150, 1997

People, computers and information electronically linked around the world by a common Protocol for communicating with each other.

Something called Internet (4)

- Links together
- Support Communication
- Based on Open Architecture
- Makes Accessible Information

Something called Internet (5)

LINKS
together
INFORMATION
by using an
OPEN DESIGN

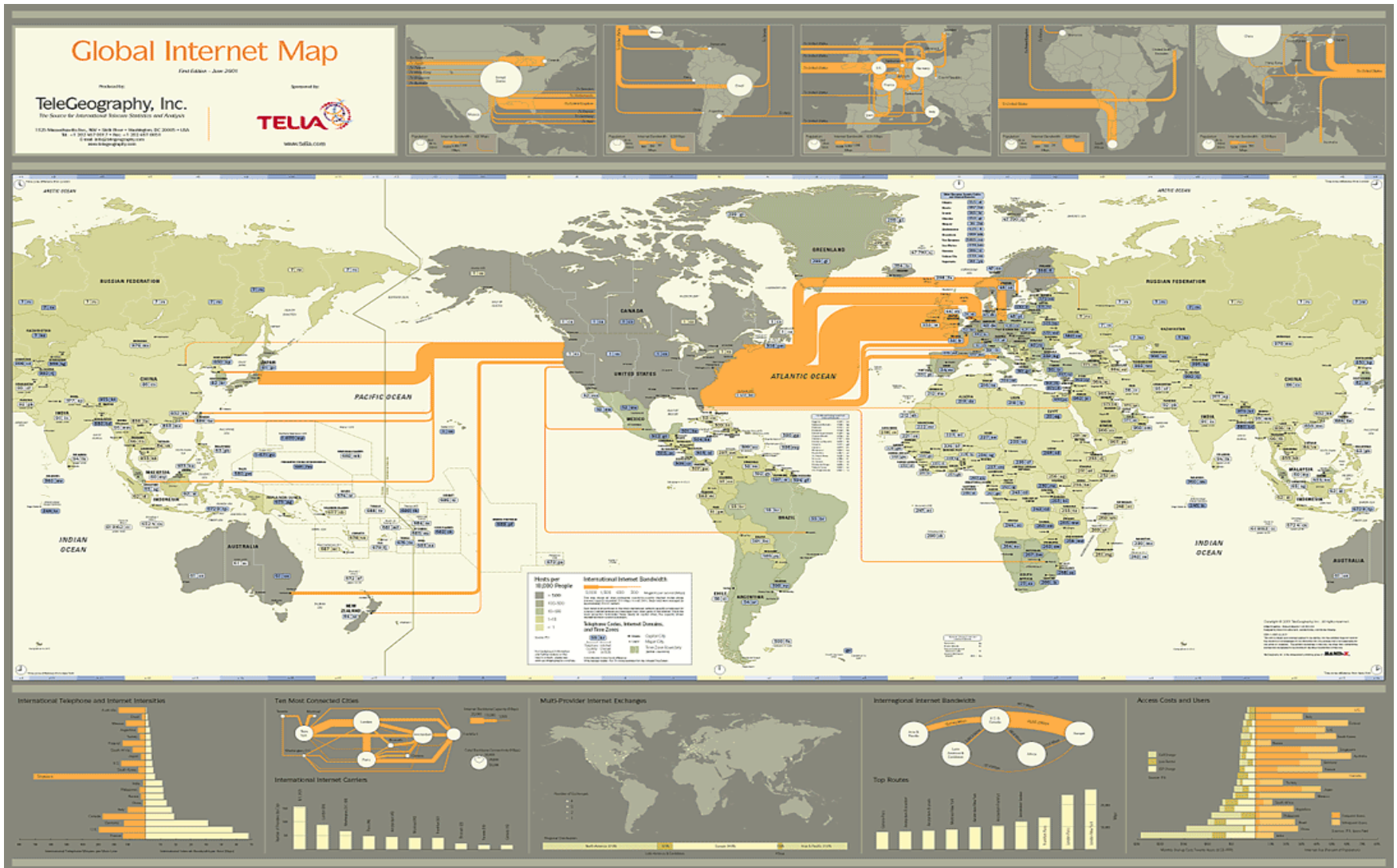
OPEN DESIGN
links us
TOGETHER
to share
INFORMATION

Something called Internet (6)

What we need?

- (Access) Media
- Communication Protocols (TCP/IP)
- Applications

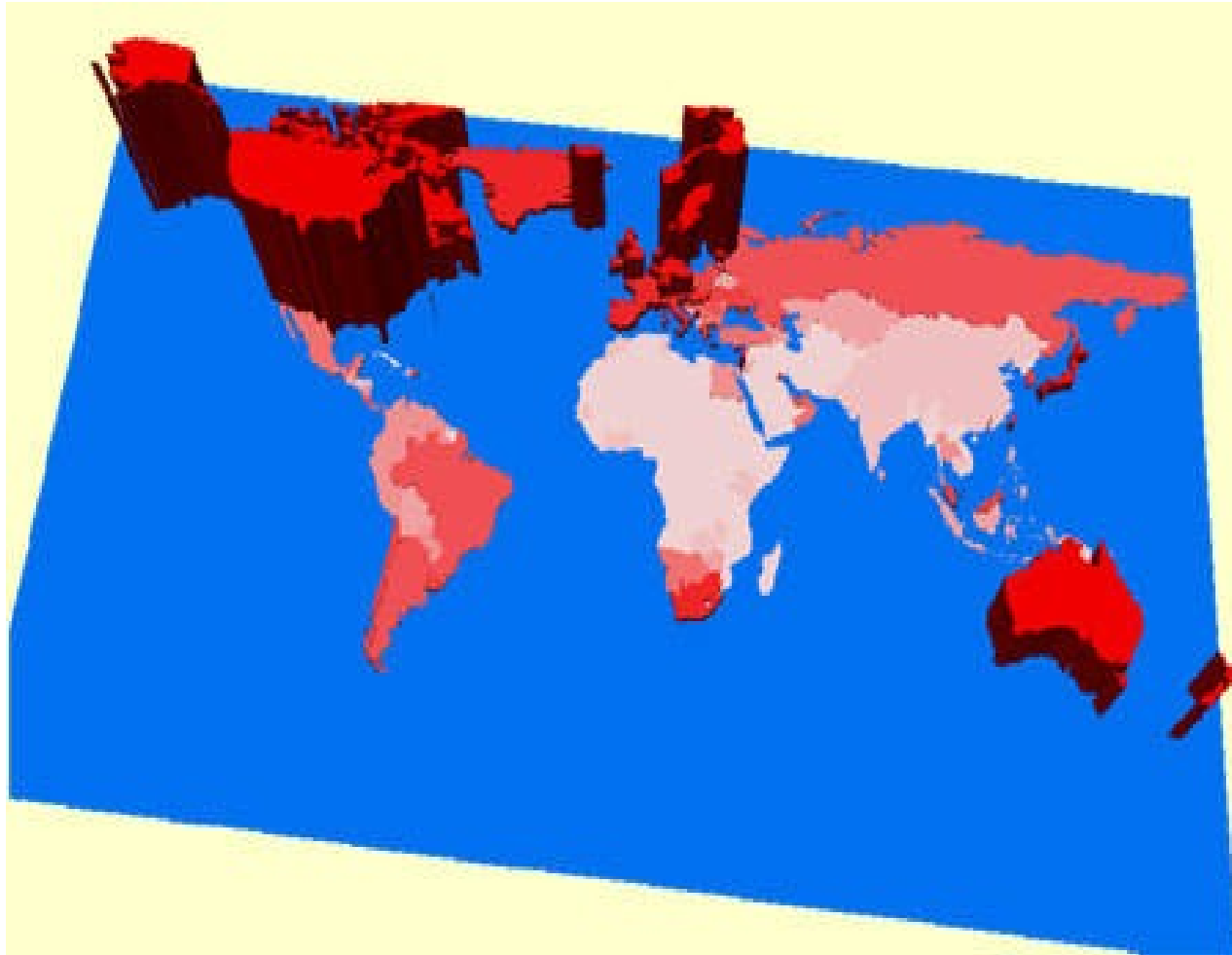
Are we connected?



Last Updated
20050908

Multimedia Training Kit
www.itrainonline.org

Are we connected?



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In Internet time ...

- Access to technology++ computing++
- Standards: IETF (open) vs IEEE (open)
- Regulation: More Telecommunication Operator/Country
- Code: Proprietary Software vs Open Software

2000-

The context:

- .com
- GSM/CDMA 2G boom!
- Broadband (DSL)
- Open regulatory framework

2000-

Telco word:

- 3G (UMTS)
- Bluetooth (ISM band)

Internet word:

- IEEE 802.11b (office)

2000-

Personal PC + PCMCIA radio interface
Regulatory Framework (ISM)
Interoperability (WiFi)
Free/Open Code (Linux Based Access
Points)

It is **our** time for wireless!

- Access to technology
- Interoperate with multiple vendors
- Access to knowledge/Code
- Legal possibility

Conclusion

- WLAN is to the wireless world, what the PC was to the computing world
- Access to technology + open standards + legal framework + access to code = freedom to do!