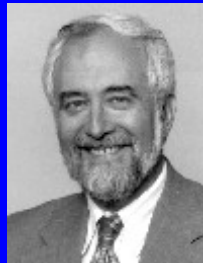


International Developments and Opportunities

**Internet Society
Summit
San Diego
11-12 Apr 1995**



**Anthony M.
Rutkowski
Executive Director
Internet Society
Reston VA USA**

Vision of the Internet

In the year 2000, Internet will :

Have more than 100 million connected hosts

Have more than one million connected networks

Have traffic which exceeds voice telephony

Be ubiquitously available worldwide

Be ubiquitously available by all transport media

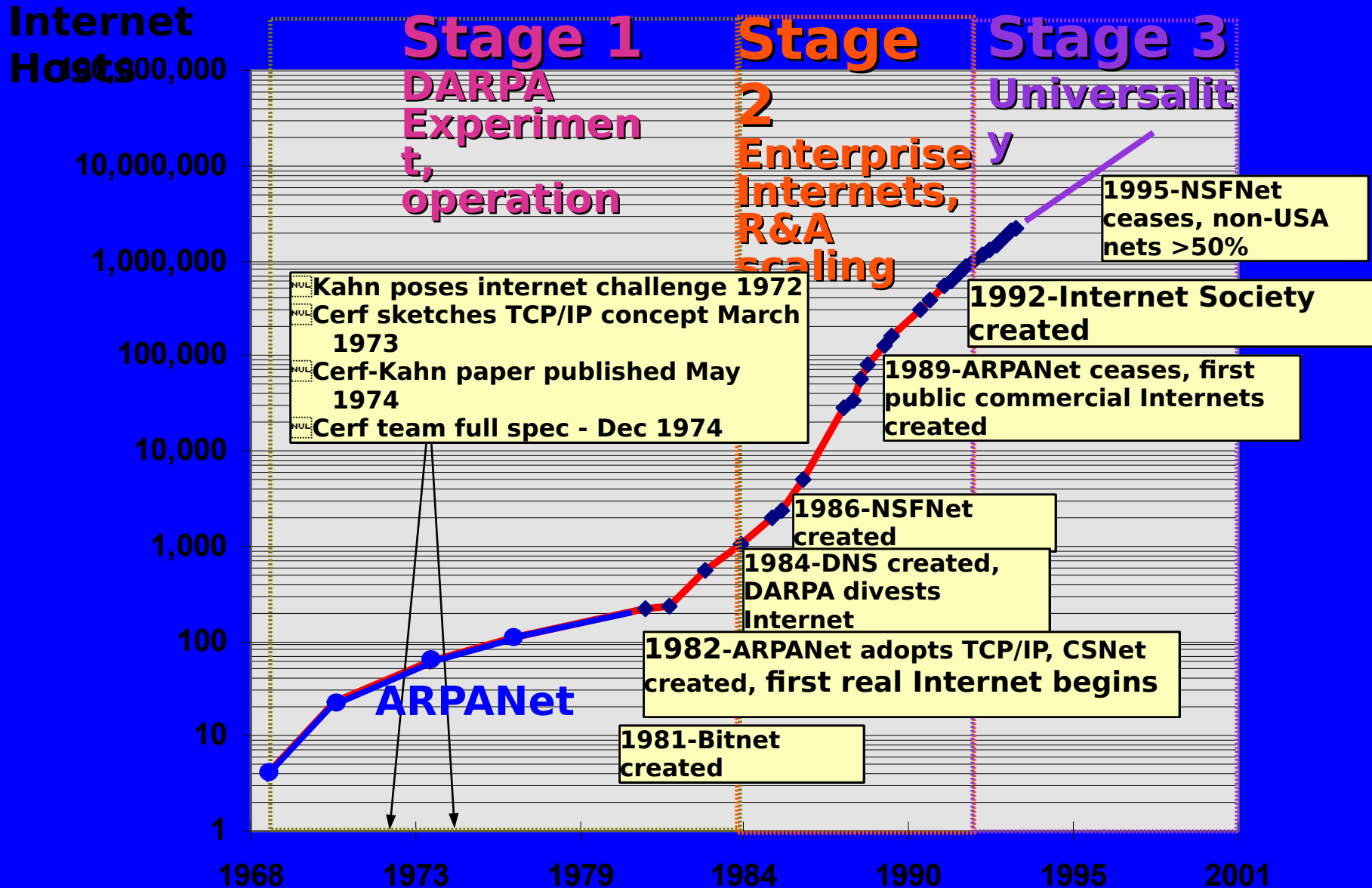
Support thousands of different applications

Support a trillion dollars a year of transactions

Be a seamless part of every communicative and collaborative aspect of our lives

Reshape institutional, business, financial and political boundaries

Internet Evolution



Key International Developments

NUL Transnational

- NUL** Promoting open Global Information Infrastructure and Economy
- NUL** Evolving the global Internet architecture
- NUL** Providing global access
- NUL** Promising International organization initiatives
- NUL** International law

NUL Multinational

- NUL** Promoting local Internet knowledge diffusion and culture
- NUL** Sustaining Internet administrative infrastructure
- NUL** Enhancing national Internet conditions
 - NUL** Open market entry
 - NUL** Minimal regulation
 - NUL** Minimal use restrictions
 - NUL** Cost-oriented tariffs, hardware, software

The Internet Marketplace

Value added	Databases, reference material, financial transactions, publication, filtering, directory, business services, software, entertainment
Applications	EMail boxes, WWW client, WWW server, File Transfer, Remote Login, Gopher, Security, NewsNet, NFS, videoconference,.....
System	Computer and network operating systems
Internet network	Internet access, network addresses, domain name, mbone access, network security and management
Access & Transport	Dialup access (local, freephone), ISDN, leased line, cable television, wireless, LEO satellite, SMDS, ATM, SDH, dark fibre

Major Marketplace Players

**Telcom
Carriers**

**Private
Network
Operators**

**Internet
Systems
Vendors**

**Software
Vendors**

**Mass Media
Providers**

**Publisher
s**

**On-line
Providers**

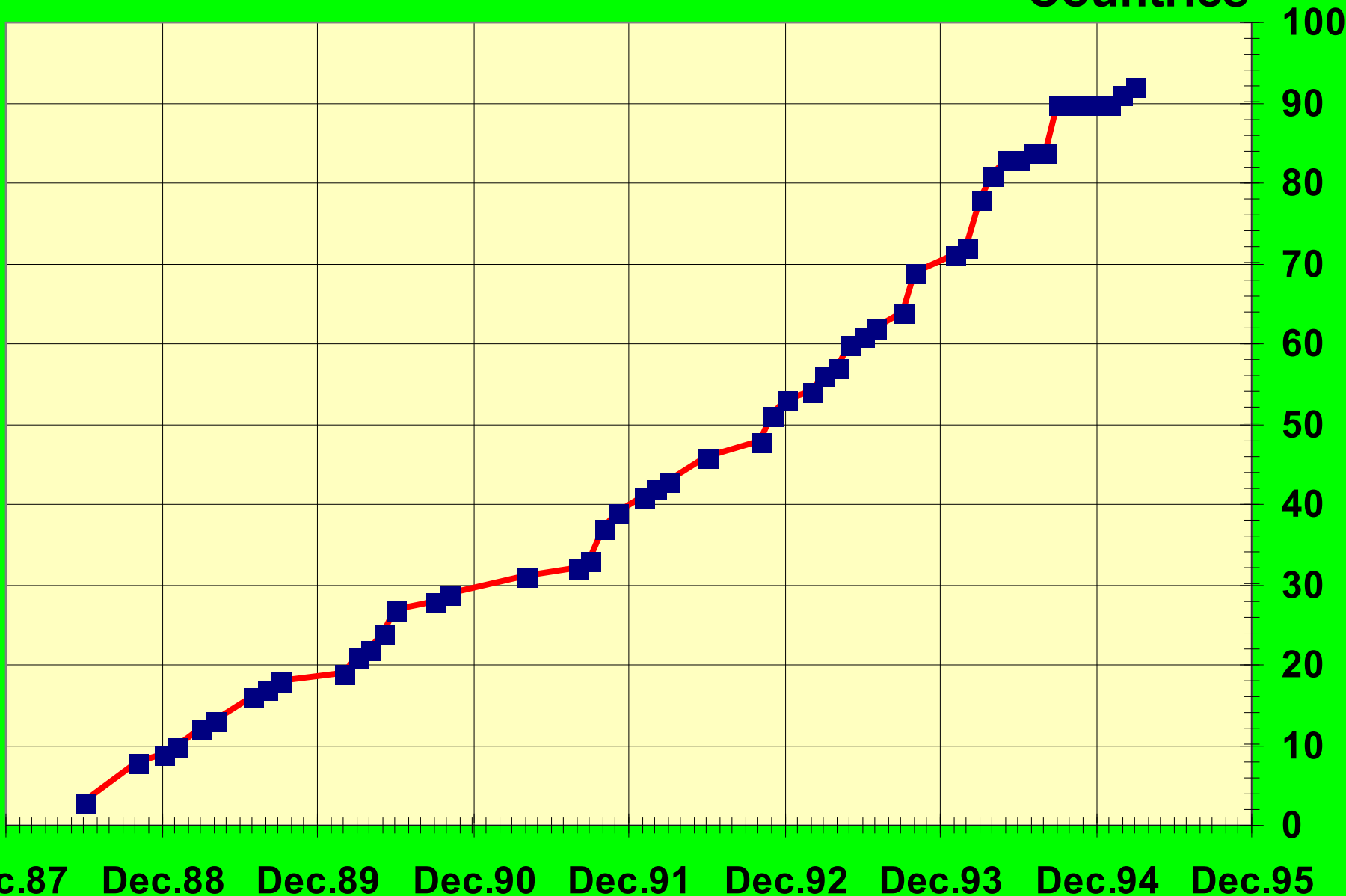
**Entertainment
Industry**

Commercial Enablers

- Simple, attractive interfaces for ordinary people, especially the World Wide Web
- Simple, low overhead monetary transaction mechanisms
- Widespread availability of software
- Widespread availability of access
- Size and growth of the public Internet
- Low cost and high performance
- Explosion of use and innovation
- Bottom-up infrastructure

Internet Backbone Connectivity

Countries

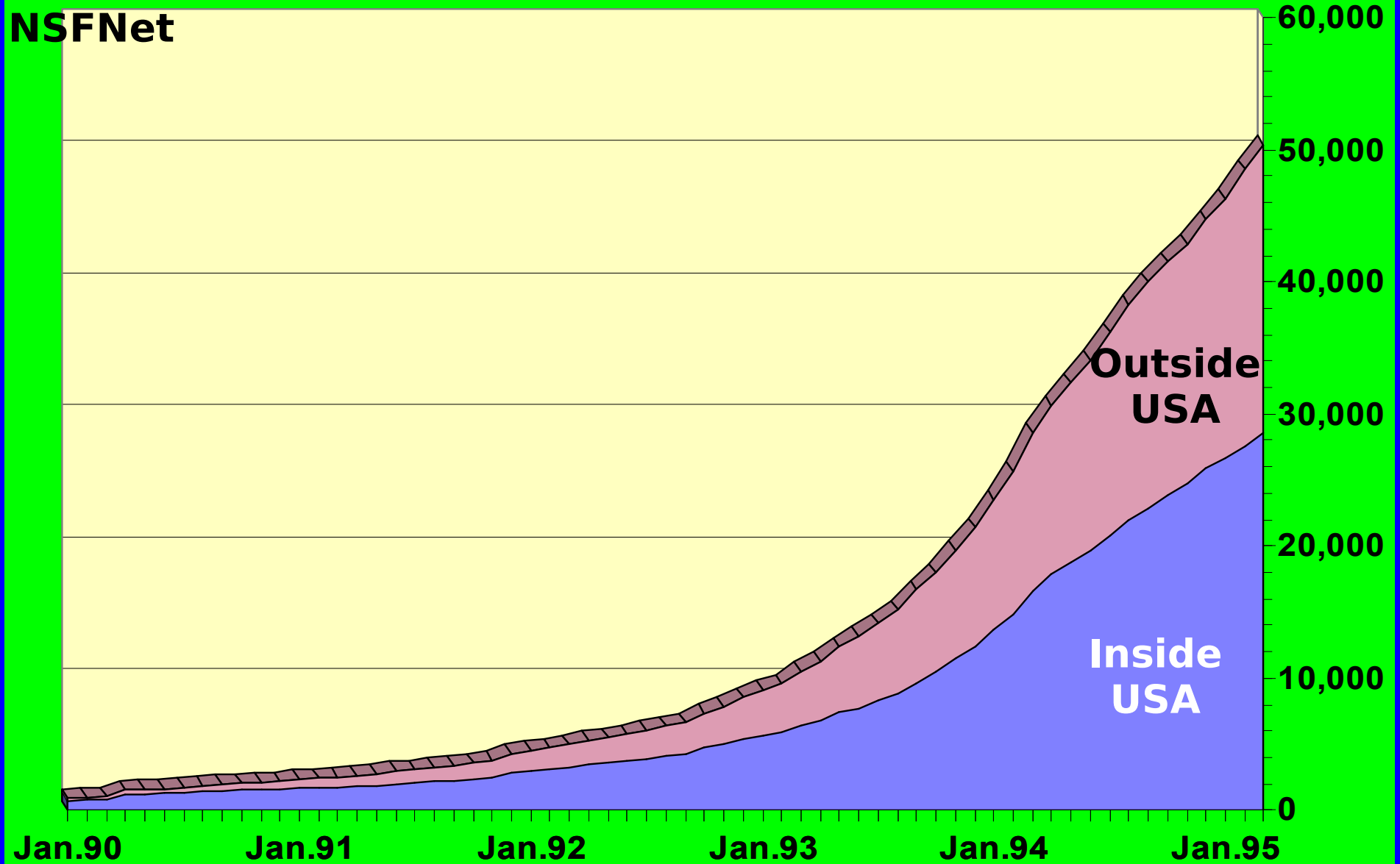


Source:

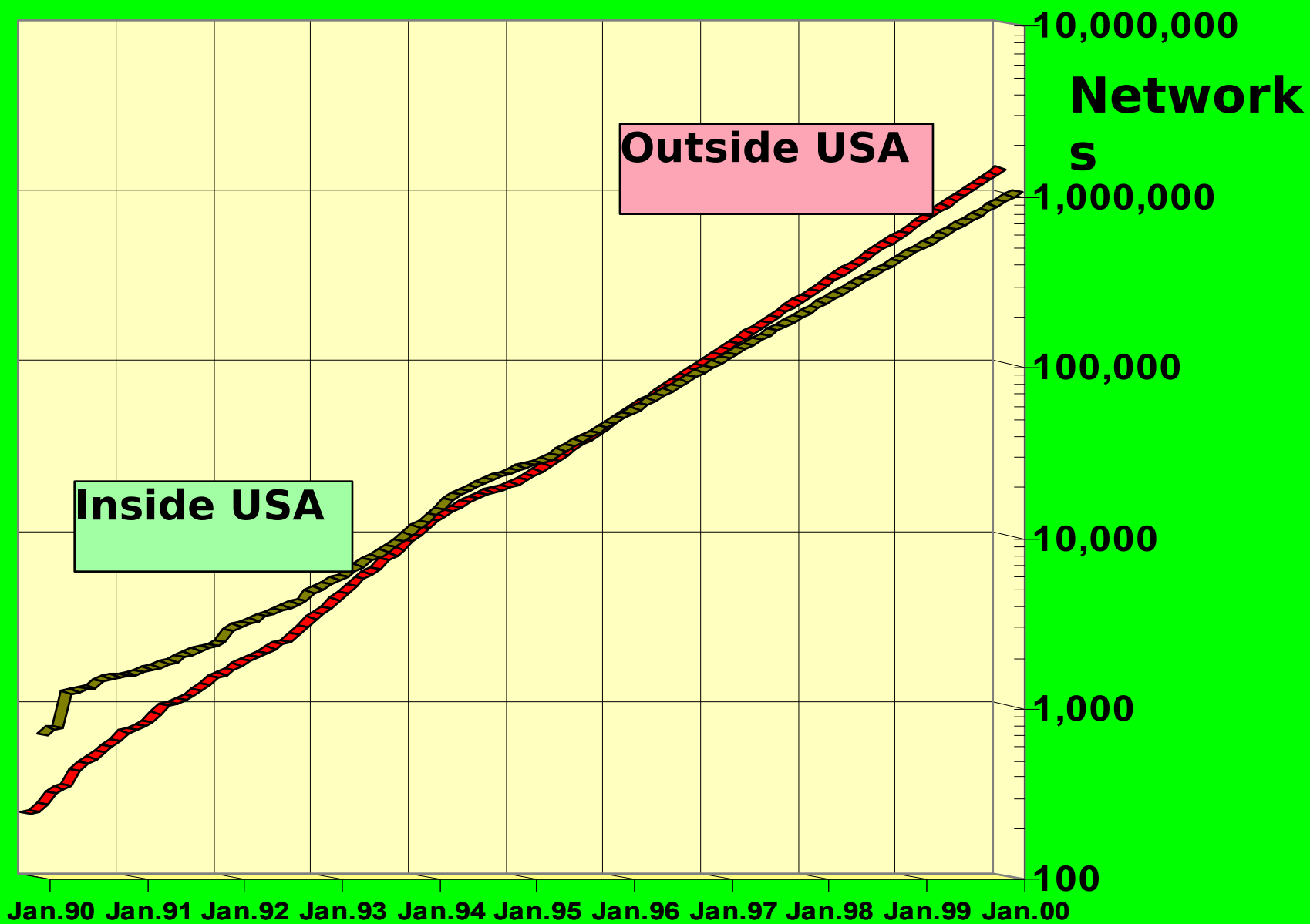
<ftp://nic.merit.edu/statistics/nsfnet>

Internet Growth in Networks

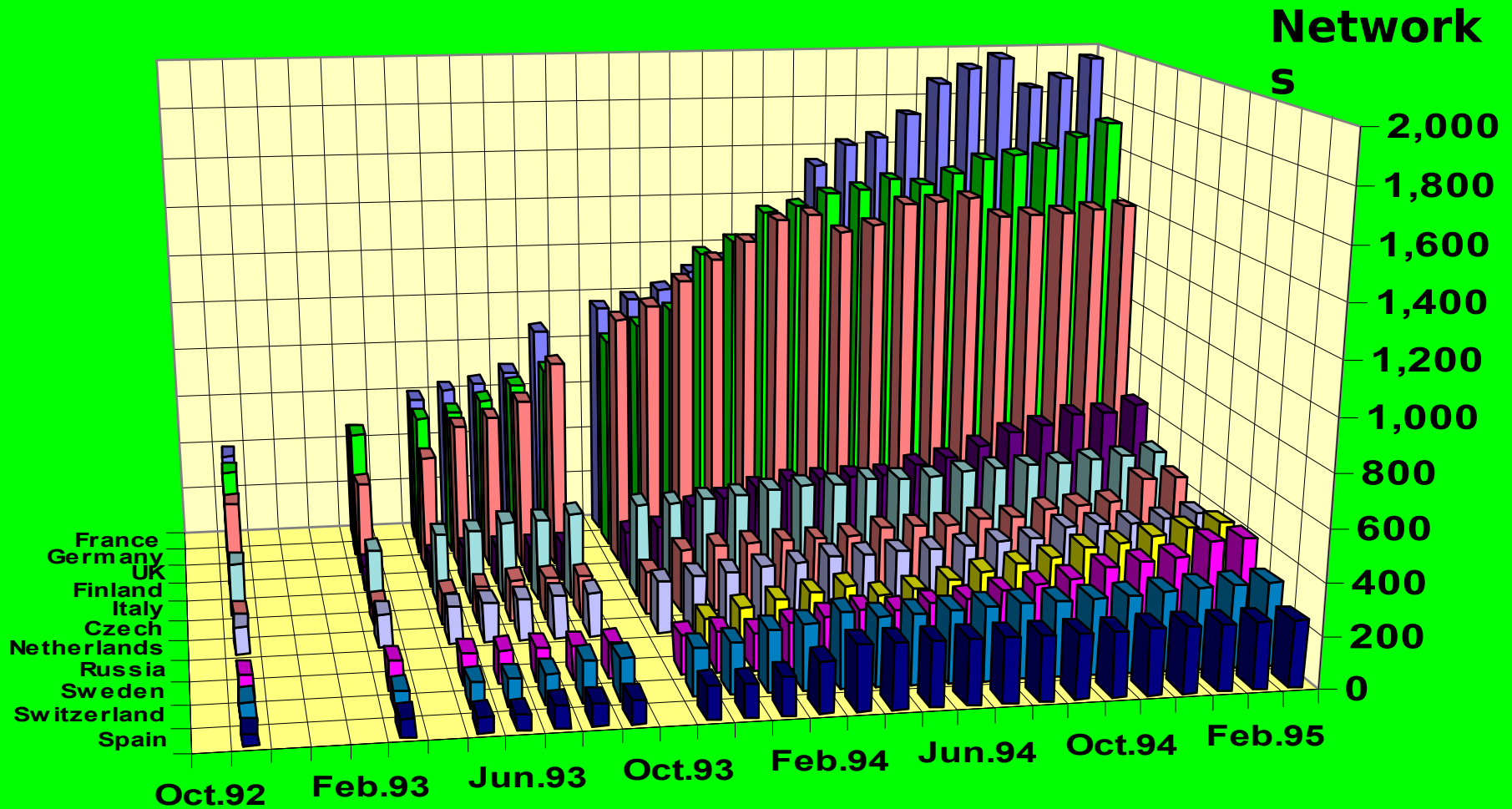
**Caveat: as seen from
NSFNet**



Projected Network Growth

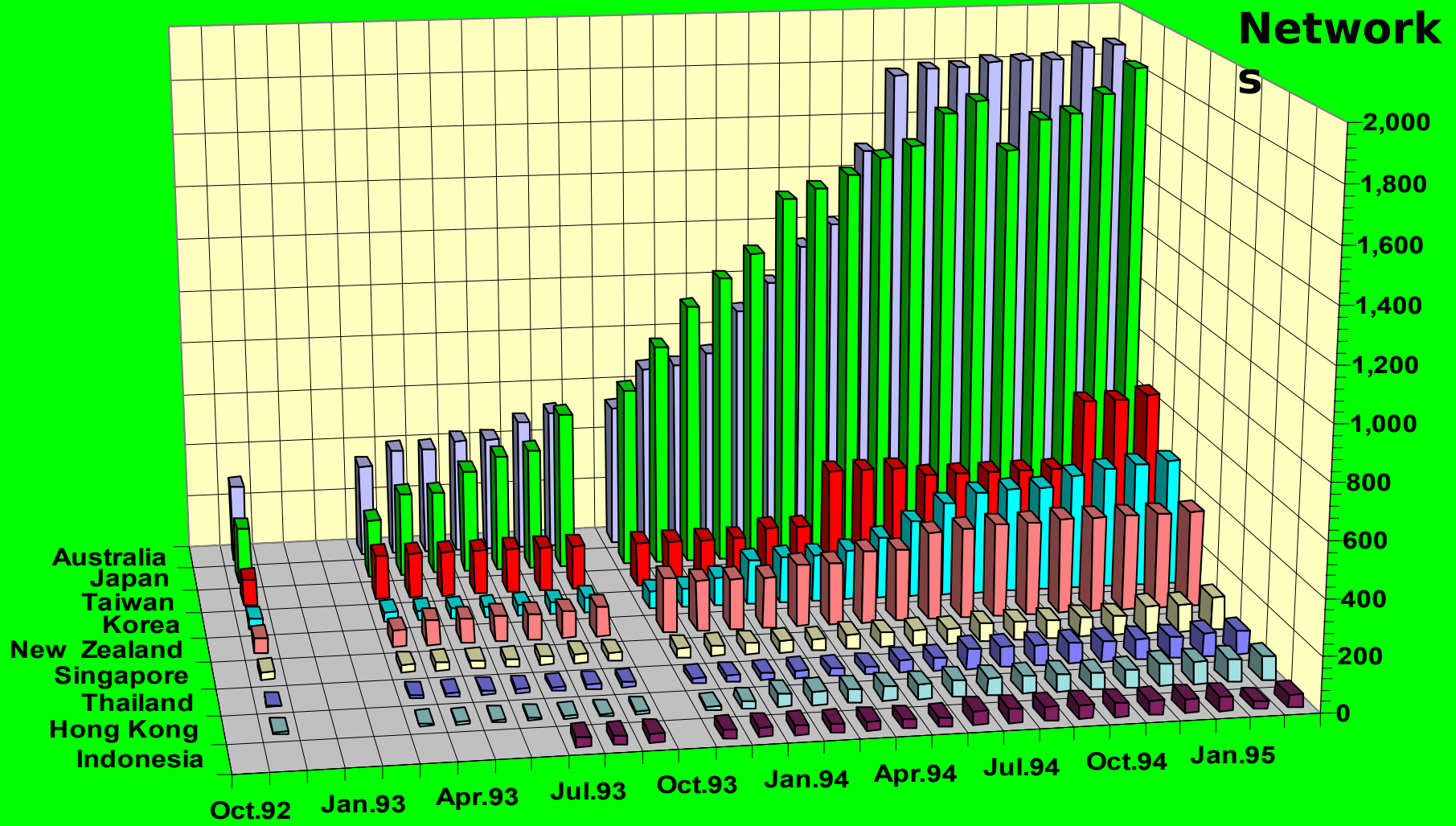


European Networks - Top 11



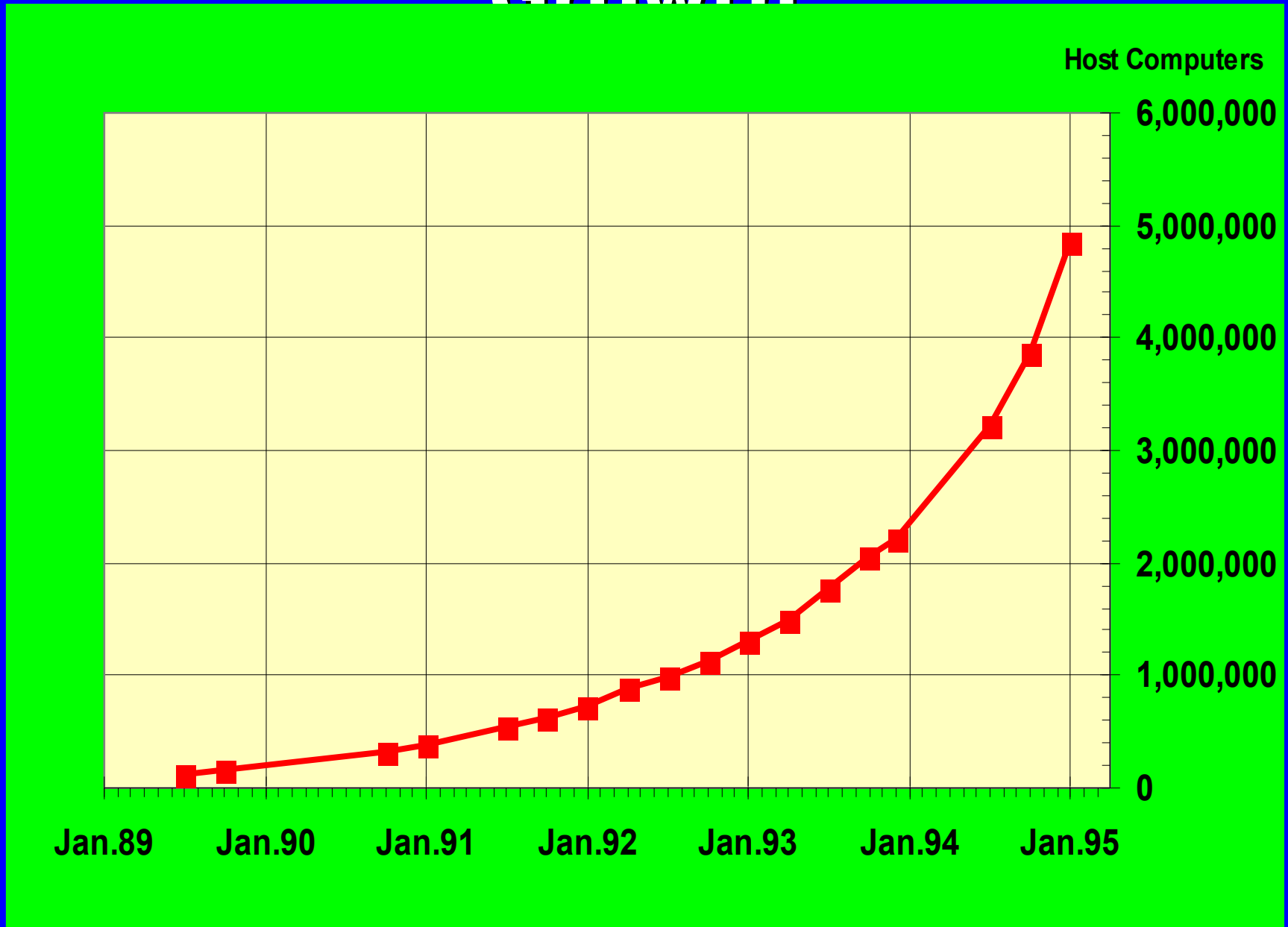
**Caveat: as seen from
NSFNet**

Asia-Pacific Networks - Top 9

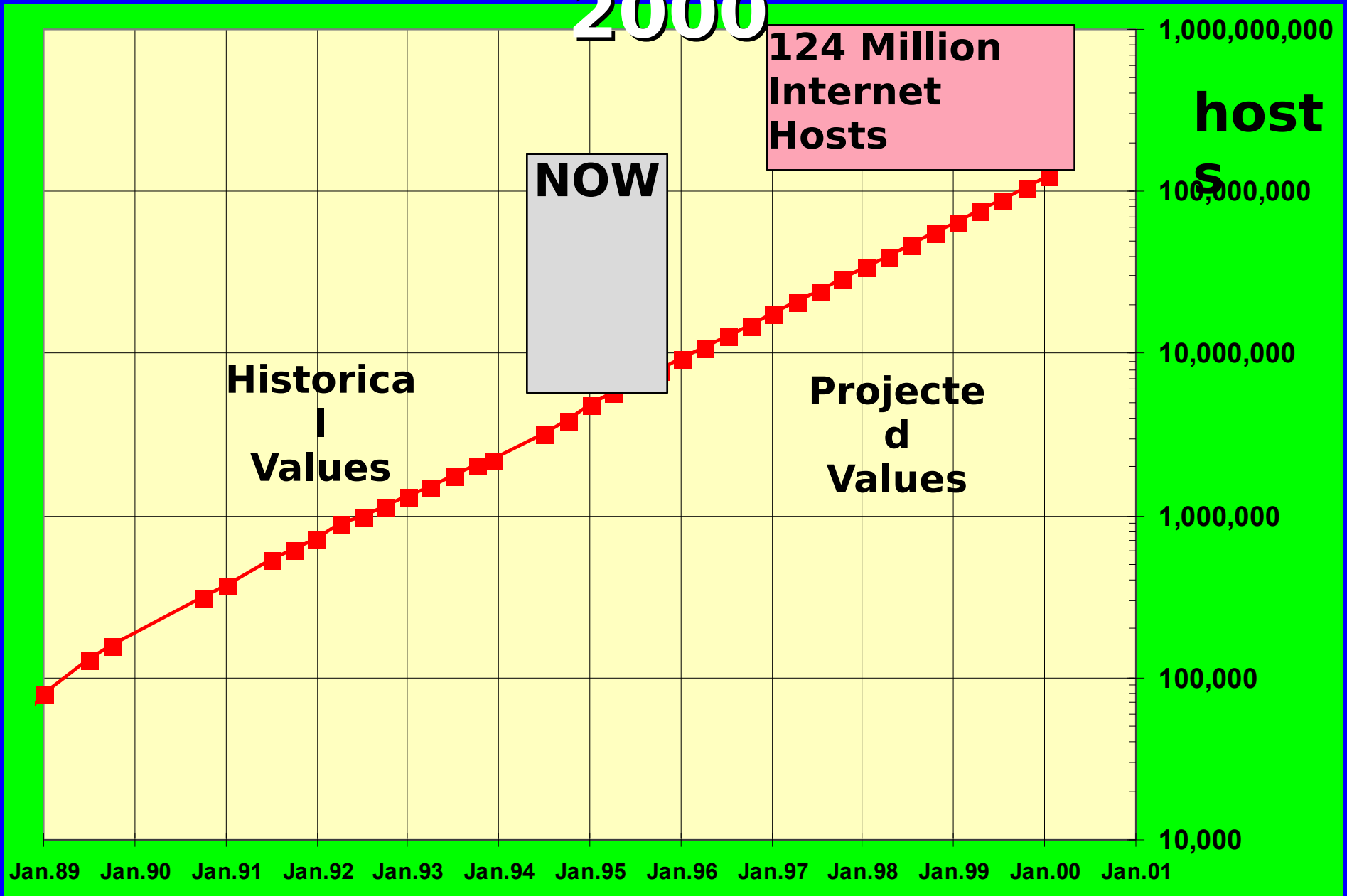


**Caveat: as seen from
NSFNet**

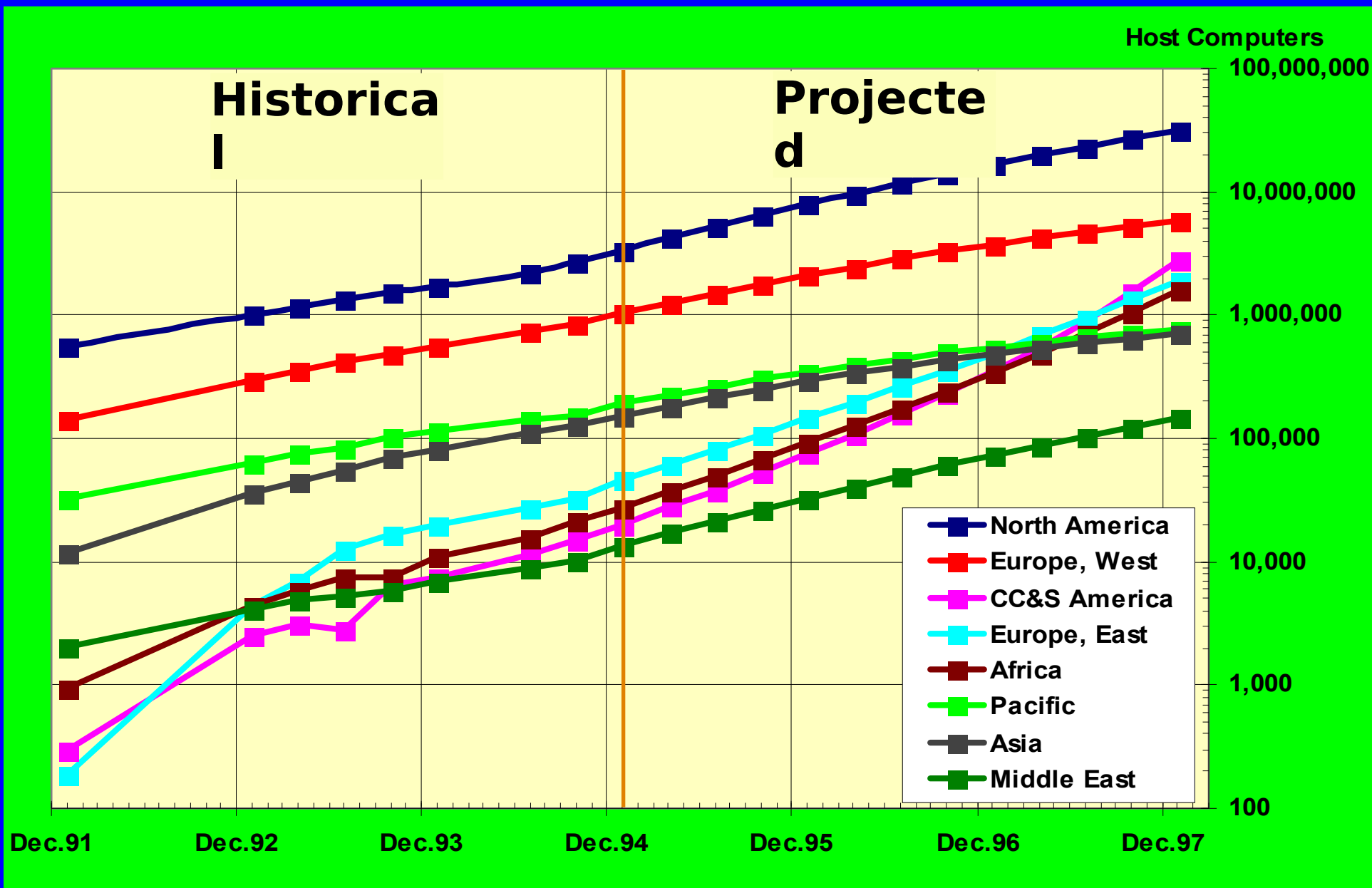
Internet Host Computer Growth



Internet Host Counts 1990-2000

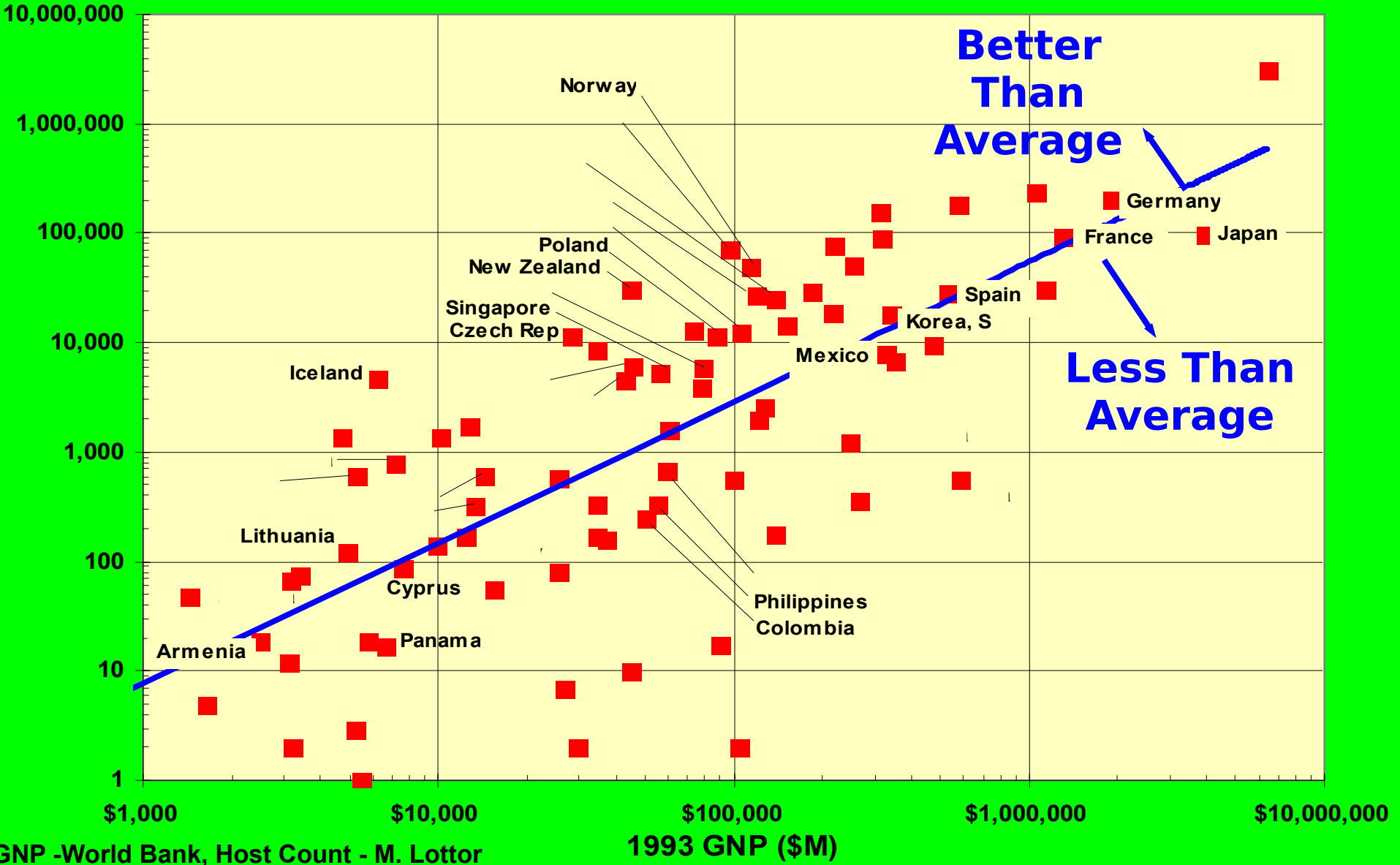


Regional Growth Projections



Internet Global Infrastructure Diffusion

Internet Host Computers - Jan 1995

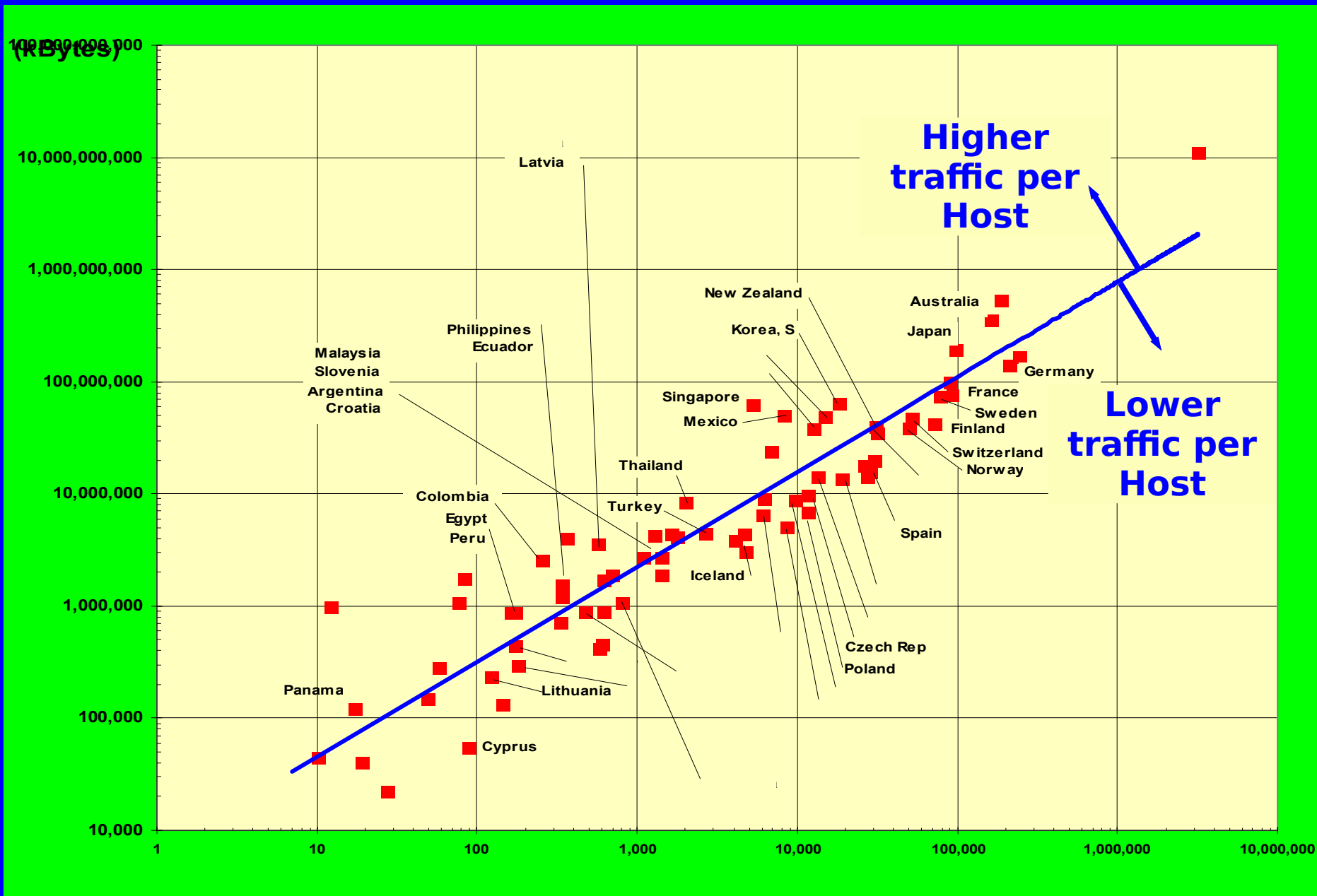


sGNP - World Bank, Host Count - M. Lottor

Factors Promoting Internet Diffusion

- Minimal or no regulatory constraints on value added and shared user networks
- Availability of cost-based private leased lines
- Availability of cost-based local access lines
- Availability of reasonably priced computers
- Facilities-based competition
- Individuals and institutions skilled in designing and operating tcp/ip computer networks
- Individuals and institutions capable of effectively using computer networking
- Time of entry into Internet community

Global Host-Traffic Profile



Reaching the Vision - Problems

- ❑ Available capital
- ❑ Remote geographical areas
- ❑ Ineffective telecom competition
- ❑ Non-cost-oriented transport
- ❑ Government regulation
- ❑ Impediments to bottom-up information infrastructure
- ❑ Changing institutions
- ❑ Changing and educating people

Developing Countries

- An infrastructure for everybody**
- Allows leapfrogging over inadequate infrastructure**
- Enables immediate participation in global information infrastructure**
- Real success stories worldwide**
- Synergies with international organization missions**
- Minimizes “brain drain”**

Emerging Problems in Cyberspace

- Implementing human rights
- Controlling unacceptable social or business behavior
- Privacy
- Legal jurisdiction and global conflict of laws
- Intellectual property compensation
- Cyberstress
- Unstable social or business dynamics
- Things we cannot imagine now!

Promises

- u Huge, fast moving global marketplace**
- u Worldwide Internet related business opportunities**
- u A world of shared minds transcends accidental boundaries, geography, institutions, and time**
- u A communications and collaboration medium profoundly affecting our evolution**
- u ...potentially filled with increased discovery, fulfillment and fascination for humankind**