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

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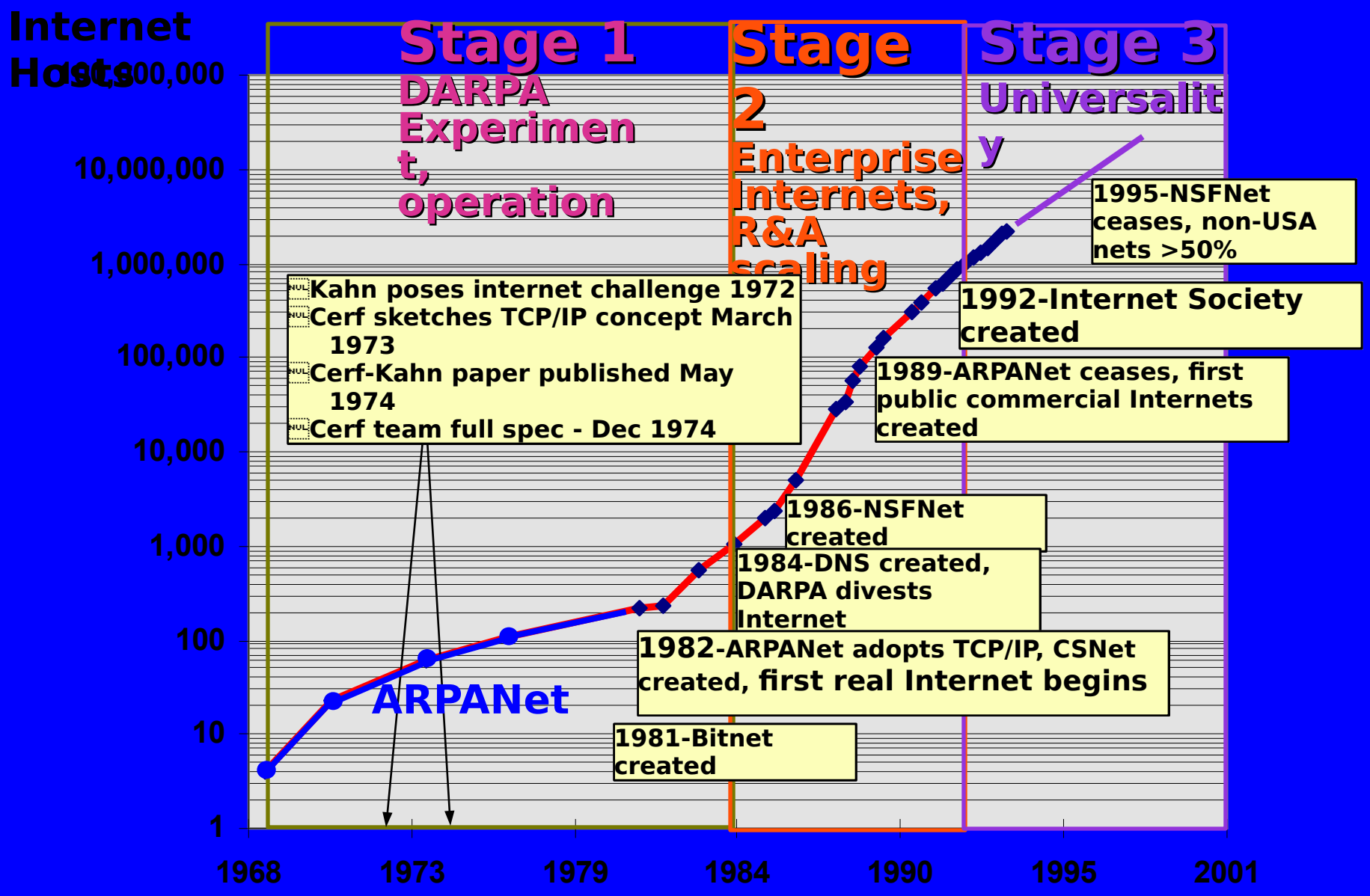
Internet Evolution



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The Internet Commercial Marketplace

- Two basic markets
  - Public Internet services
  - Enterprise internet services
- Multiple market layers
  - access and transport
  - Internet service
  - applications and operating systems
  - customer services
- Low entry barriers
- Rapidly innovating and expanding
- Great differentiation options
- Constant churn in market players

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Layered Internet Marketplace

Value added	Databases, reference material, financial transactions, publication, filtering, directory, business services, software, entertainment
Applica-tions	EMail boxes, WWW client, WWW server, File Transfer, Remote Login, Gopher, Security, NewsNet, NFS, videoconference,.....
Systems	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

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Major Marketplace Players

Telcom Carriers

Private Network Operators

Internet Systems Vendors

Software Vendors

Mass Media Providers

Publishers

On-line Providers

Entertainment Industry

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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

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Bottom-up Infrastructure

- Last decade a collective learning experience
- VLSI + PCs + workstations + LANs, routers + software + individual initiative + restructured workplace = bottom up information infrastructure
- Massive markets and new paradigms created
- Internet technologies and applications were “there”

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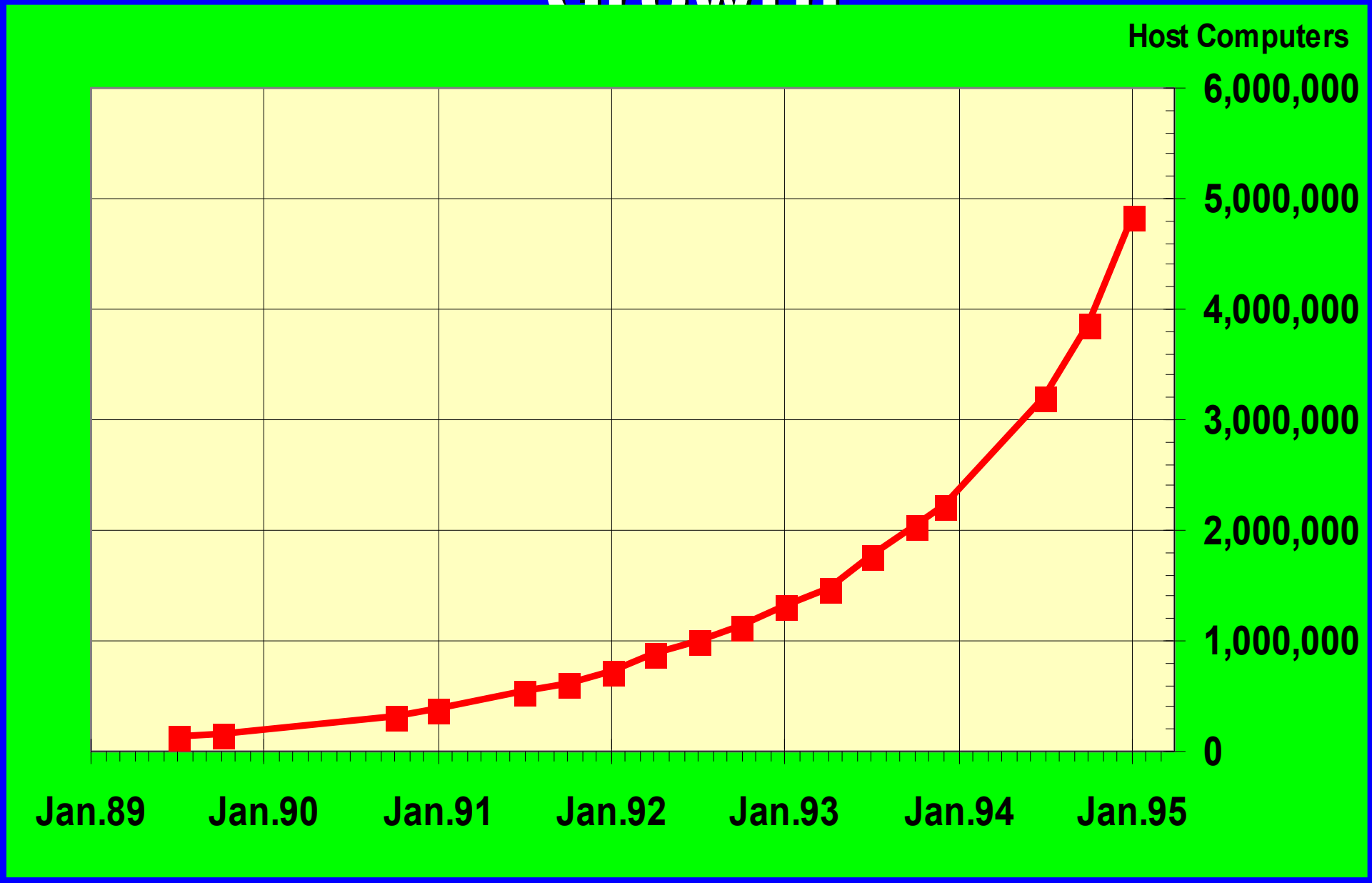
Internet Host Computer Growth



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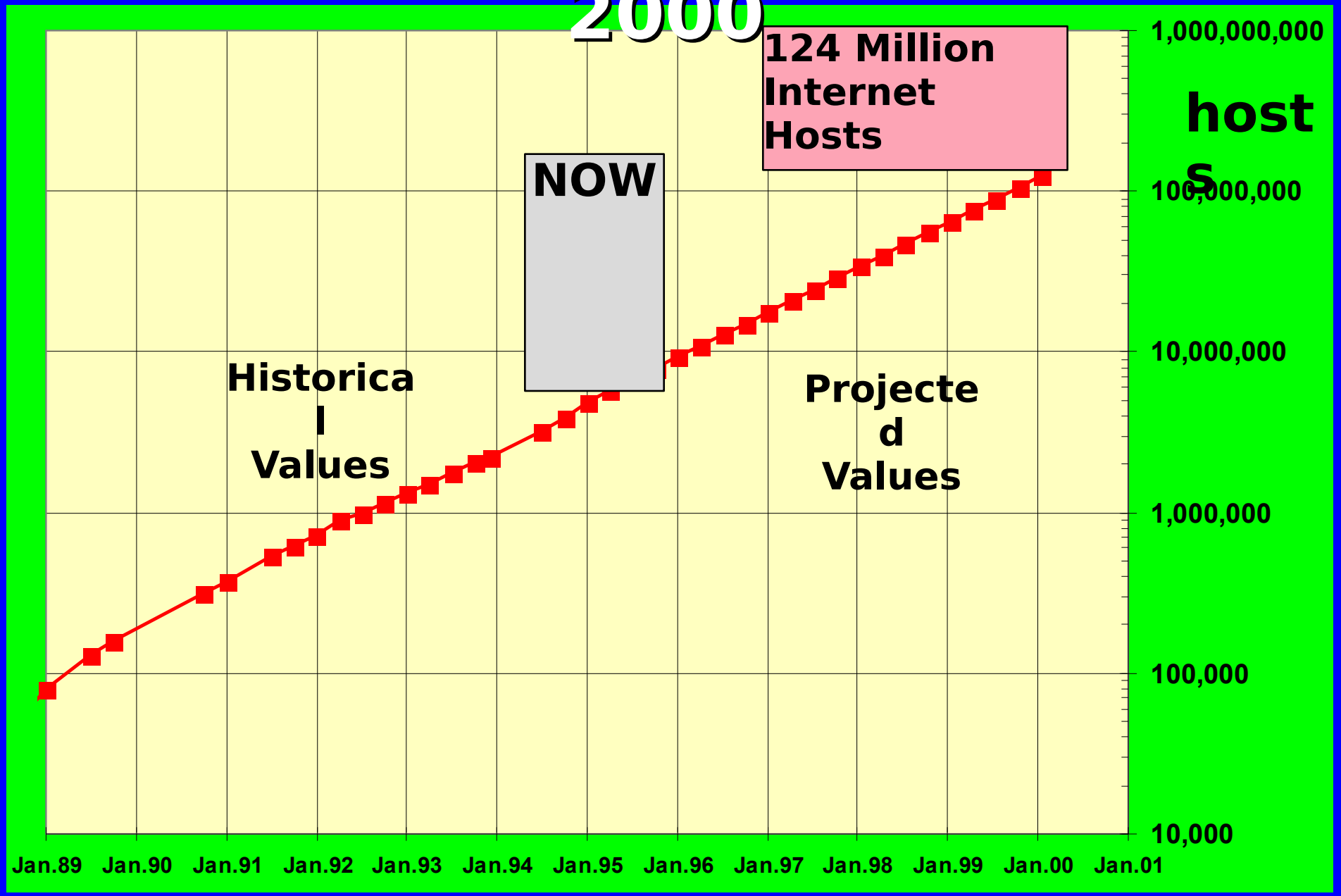
Internet Host Counts 1990-2000



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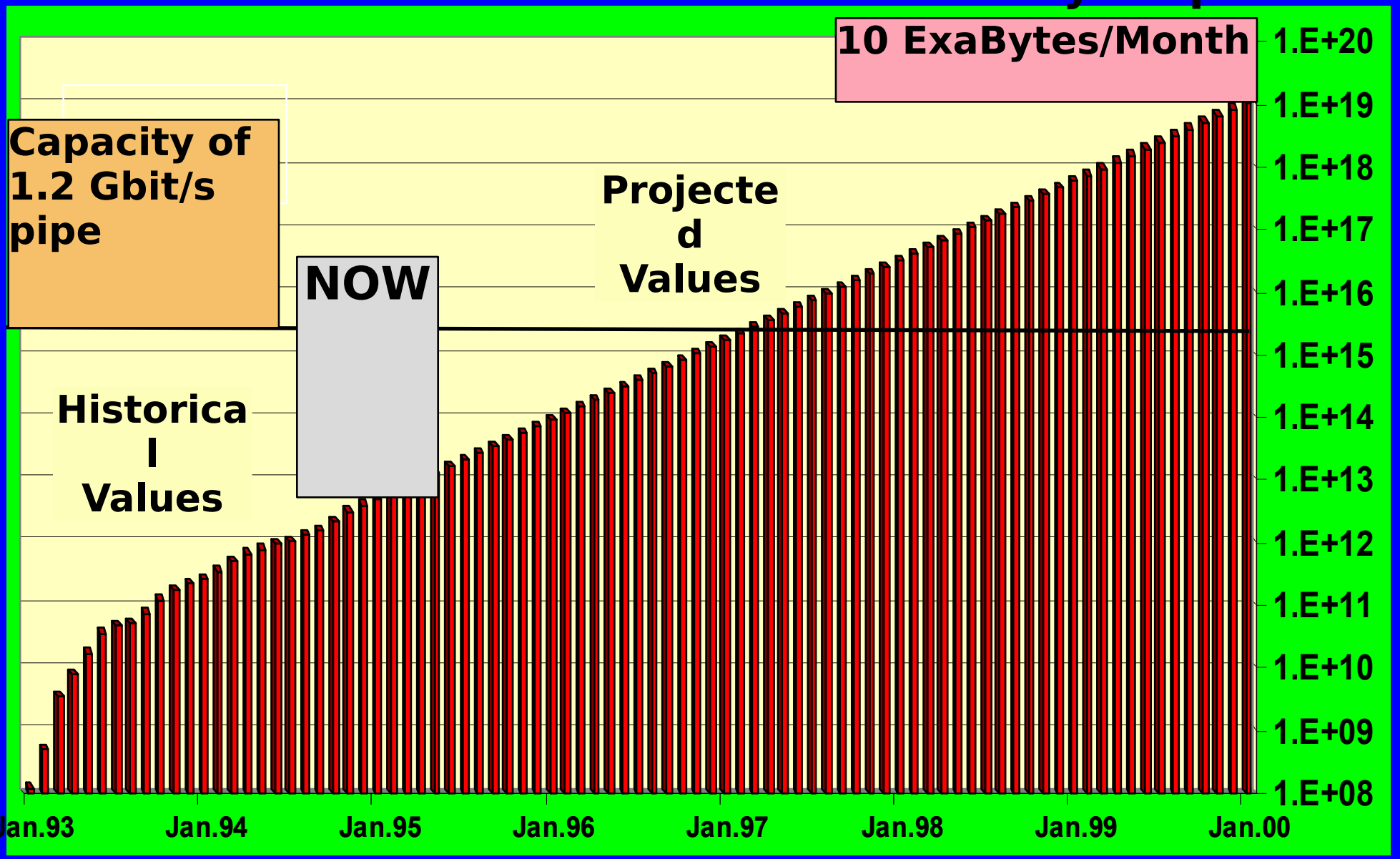
World Wide Web Traffic 1993-2000



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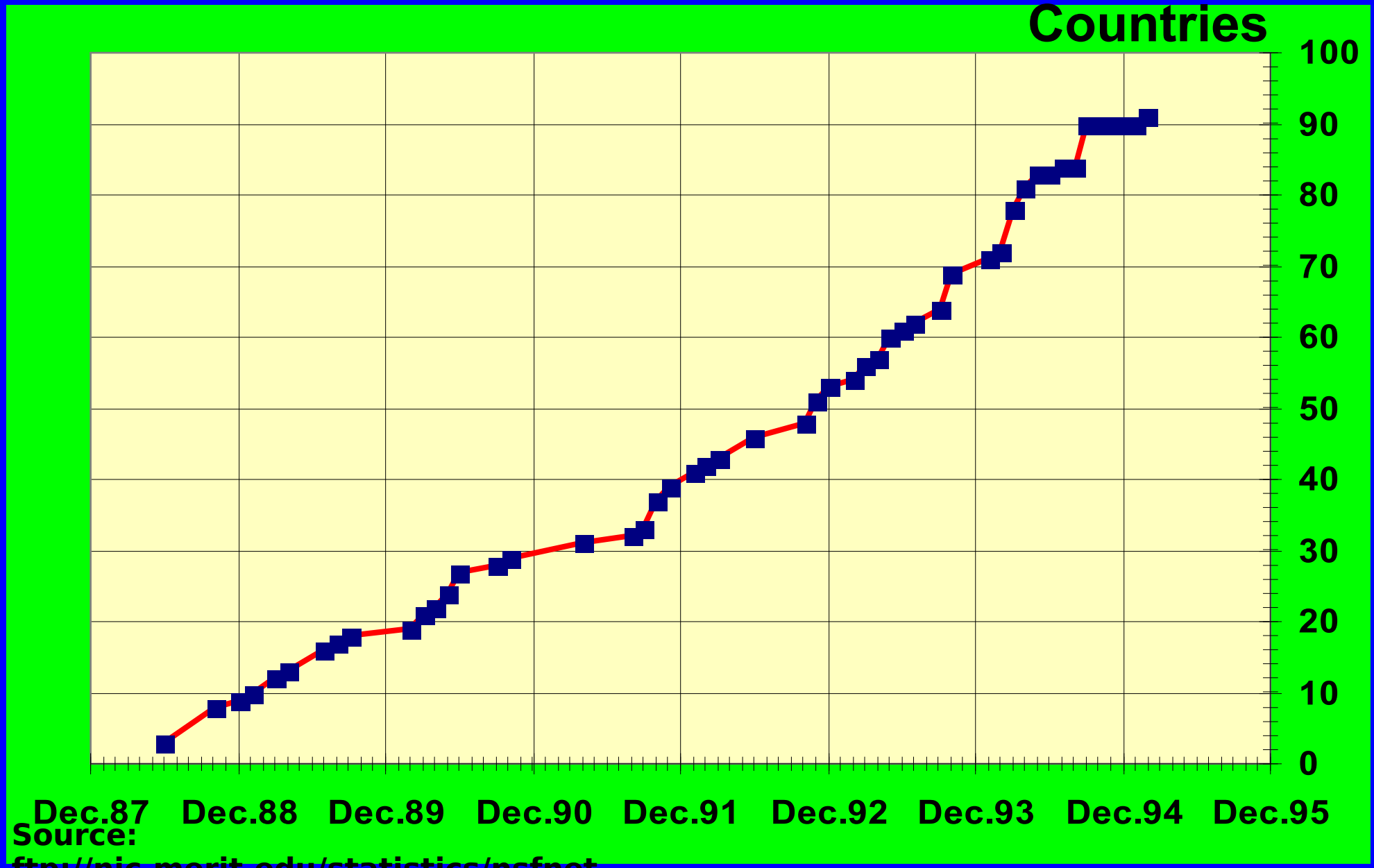
Internet Backbone Connectivity



Source:
ftp://nic.merit.edu/statistics/nsfnet

Source: nis.nsf.net country connectivity

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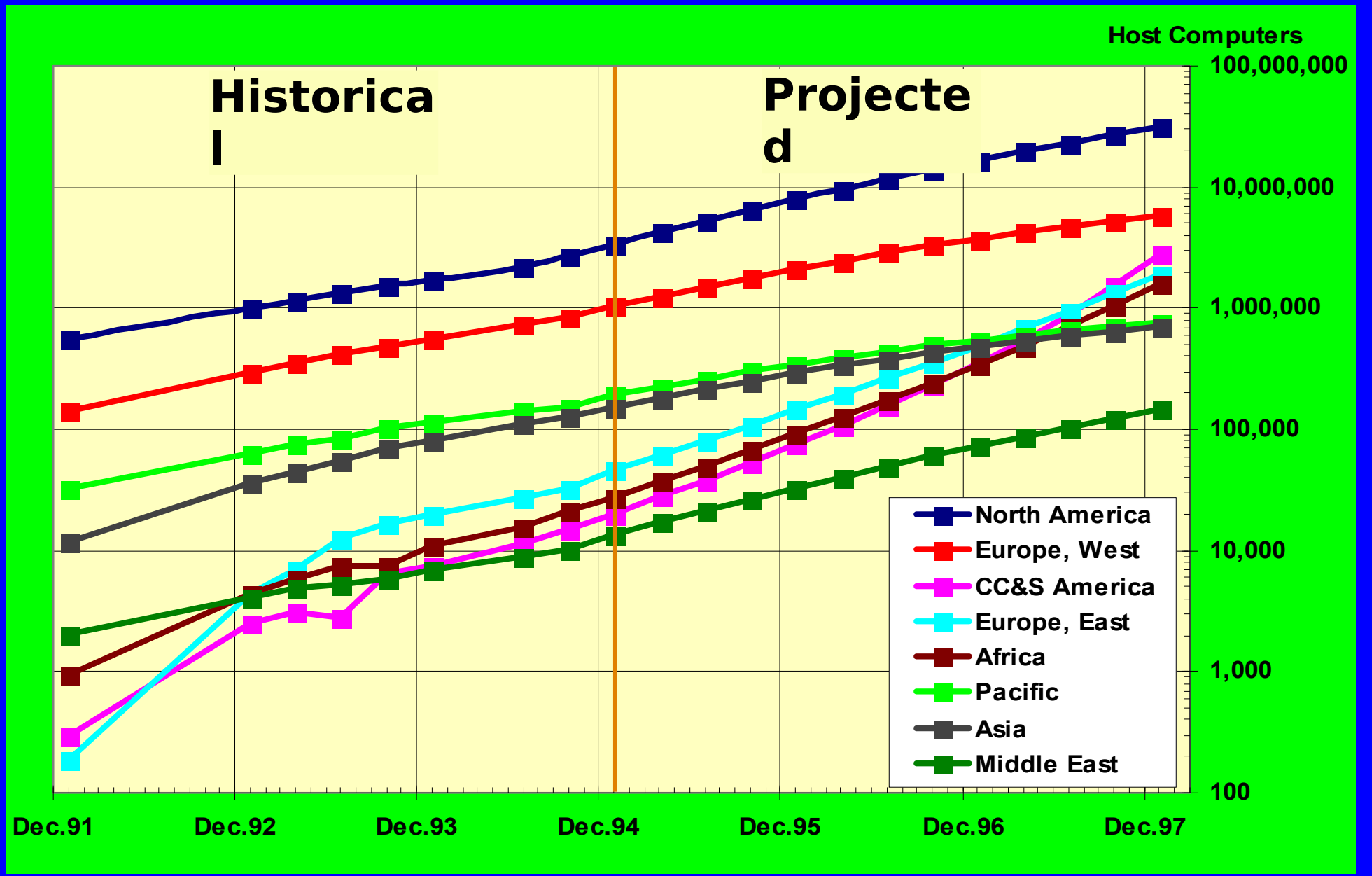
Regional Growth Projections



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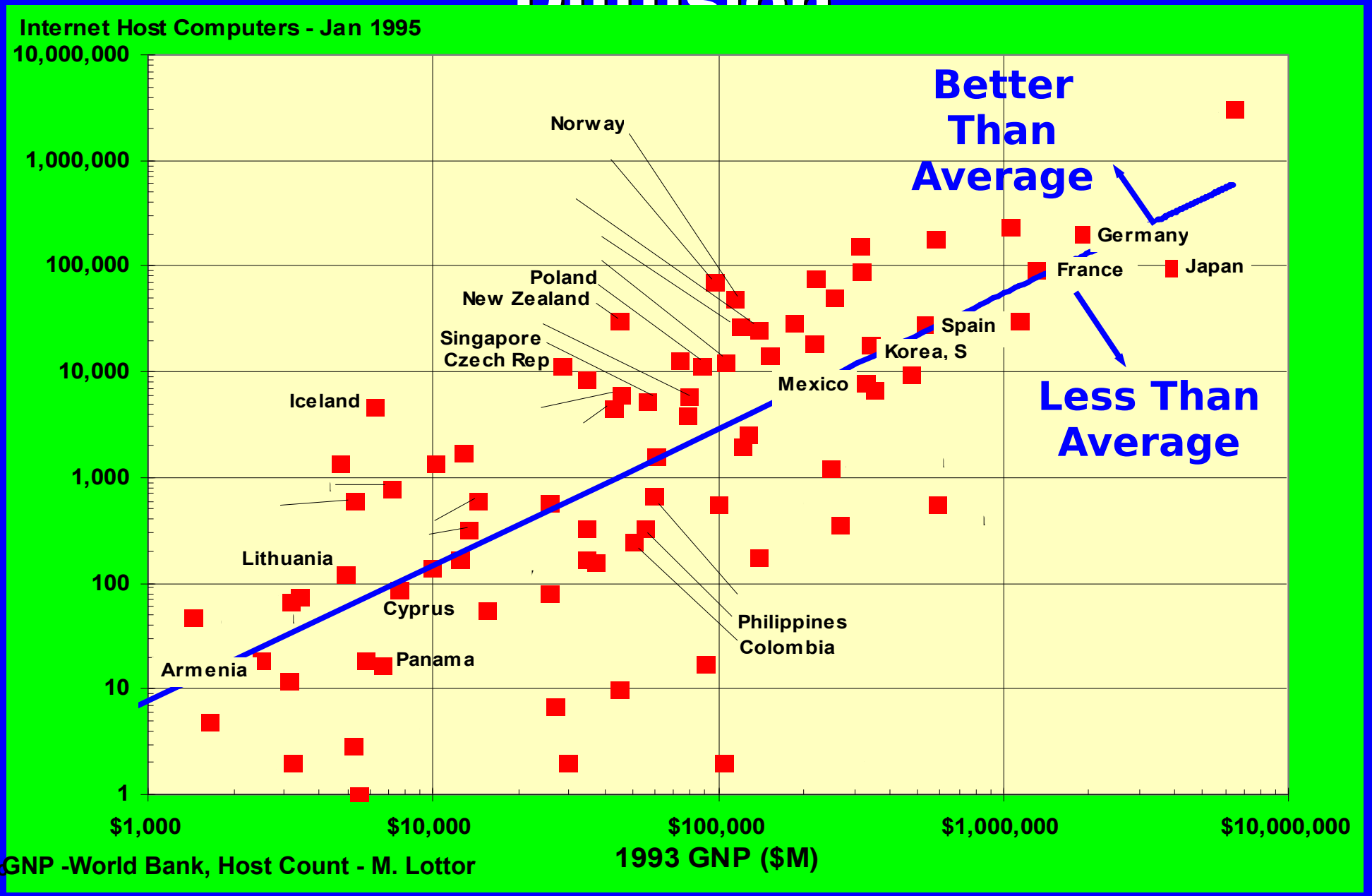
Internet Global Infrastructure Diffusion



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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

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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

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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”

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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!

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Promises

- A world of shared minds transcends accidental boundaries, geography, institutions, and time
- A communications and collaboration medium profoundly affecting our evolution
- ...potentially filled with increased discovery, fulfillment and fascination for humankind

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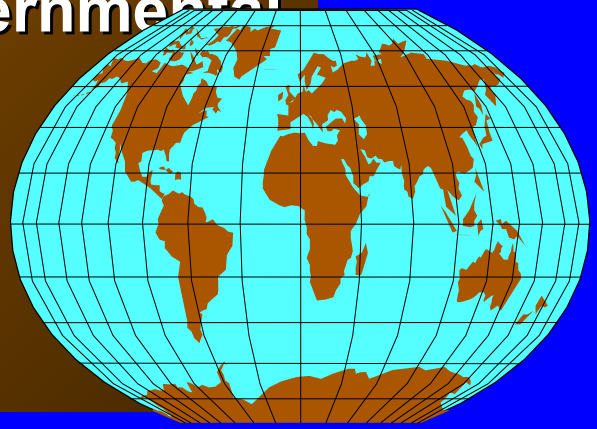
What is the Internet Society ?

- The global international organization for open systems internetworking and the *Internet*
- A common mechanism for:
  - standards making
  - operational administration and coordination
  - research coordination and education
  - global cooperation among national, regional, and other international bodies
- An international means for sharing information and encouraging development of internet-related infrastructure and use around the world
- Members consists of individuals and organizations - commercial, governmental and non-profit
- Contact <isoc@isoc.org>
  +1 703 648 9888



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