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ISP(Internet Service Provider)

Gryparis Dimitris, Chris Perivolaropoulos

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What is an ISP really

- Access to the internet
- Webite buiding
- Virtual Hosting
- e-mail service
- ...other web services

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The internet started off as a closed network between government research laboratories and relevant parts of universities

To access the internet you needed an account at a university or a government agency

1990 Brookline, Massachusetts-based The World became the 1st commercial ISP

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more than 100 ISPs in USA

XXX: top five providers + subscribership

Most subscribers OTE

- Largest ISP in greece: OTE
- Common speed 24/1
- Bitstream network property of ote
  - lines by HOL and Tellas
- Satellite broadband available by Hellas Sat sattelite

XXX: list of isps

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Peering Connections

- Not charged
- Upstream not filtered or logged

Transit Connection

- Payed connection
- conditions defined per case

Tier 1

- Large netwroks
- Interconnected with extreme speeds
- Described by hamiltonian graph
- Only peering connections

Tier 2

- Smaller netwroks

Tier 2

- Smaller netwroks
- Ensure access by Tier 1

Tier 2

- Smaller netwroks
- Ensure access by Tier 1
- Peering and transit

Tier 2

- Smaller netwroks
- Ensure access by Tier 1
- Peering and transit

Tier 3

- Propertary
- Transit connections only

Internet Exchange Point (IXP)

- gateway between large geographical regions
- Reduce delivery cost

chart 5 first and greece

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international bandwidth usage statistics

pg13 graphs

pg14 server OS

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Racks

- Module of a mainframe
- Standard mounting and upporting mechanism
- Used to optimize modularity of servers

Server System Requirements

- 5 Concurrent Users:
    - 2GHz CPU
    - 512MB RAM
    - 5GB database space

Server System Requirements

- 5 Concurrent Users:
  - 2GHz CPU
  - 512MB RAM
  - 5GB database space
- 25 Concurrent Users:
  - Quad 2GHz CPU
  - 2GB RAM
  - 10GB database space

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Throttling

- save device
- cut upstream OR downstream
- precaution to server crashes

Capping

- Save the network
- Cut down on all activity
- Examples:
    - P2P
    - pinging
    - illegal activity

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