Anders Berg, CTO, VG Multimedia (andersb@vg.no)

Me

CTO at VG Nett since:

Welcome to Varnish

- ❖ **Agenda:**
  - ❖ **Presentation of Varnish (Anders Berg, VG Multimedia)**
    - ❖ **What**
    - ❖ **Who**
    - ❖ **Why**
  - ❖ **Some technical "details" (Poul-Henning Kamp)**
    - ❖ **How**
  - ❖ **Linpro delivers support (Dag-Erling Smørgrav/Stein Halvorsen, Linpro)**
    - ❖ **Open Source and professional support**
  - ❖ **Future plans/Q & A (Anders Berg)**

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What is Varnish?

⬡ Varnish is a HTTP accelerator

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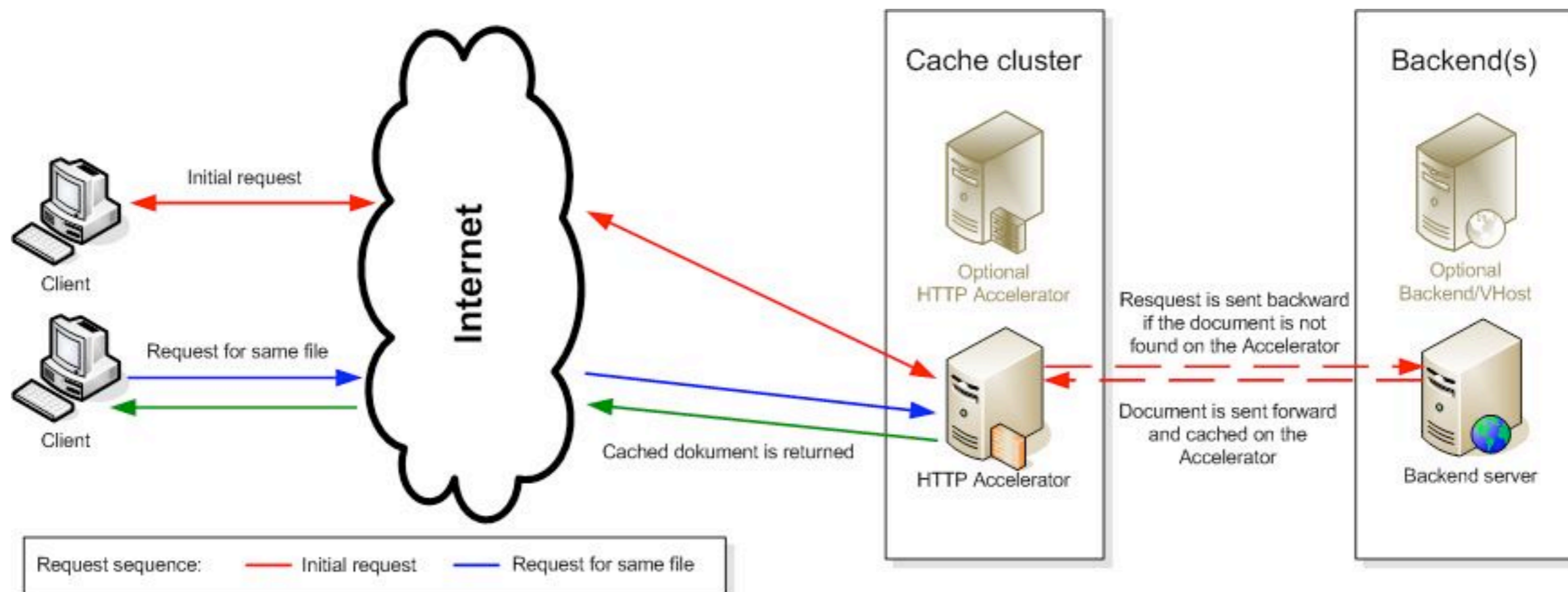
What else is Varnish?

- Varnish is **fast**. Very **fast**.

- Varnish is designed for the future.

- Varnish gives control over content.

- Varnish saves you $$$.

  - ~$ 100k-150k first 1-1,5 years for VG alone.

- Varnish is free. Open Source, BSD license.

- Varnish is supported.

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Who is behind Varnish?

- ⬢ **VG Multimedia is initiator and sponsor.**

- ⬢ **Linpro contributed with development, tools and support.**

- ⬢ **Poul-Henning Kamp has written majority of code.**

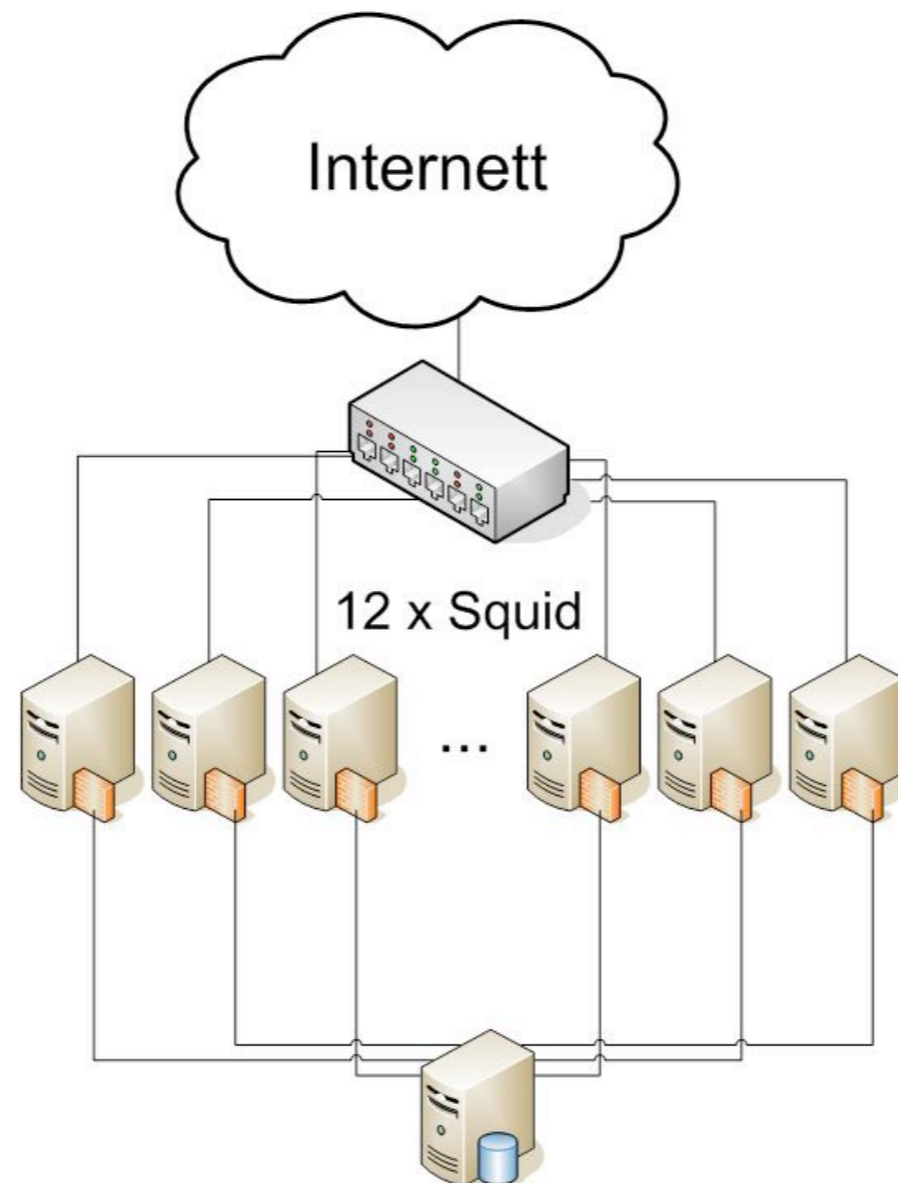- ⬢ **Small team, 6 month development.**

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Why did we do Varnish?

- 🔶 **VG Nett has a lot of traffic.**

- 🔶 **VG Nett is gaining complexity <-> traffic <-> expenses.**

- 🔶 **"Grew" out of Squid.**

- 🔶 **Varnish was missing. There was an empty spot.**

- 🔶 **VG Nett has used Open Source since 1995.**

  - 🔶 **Time to give something back.**
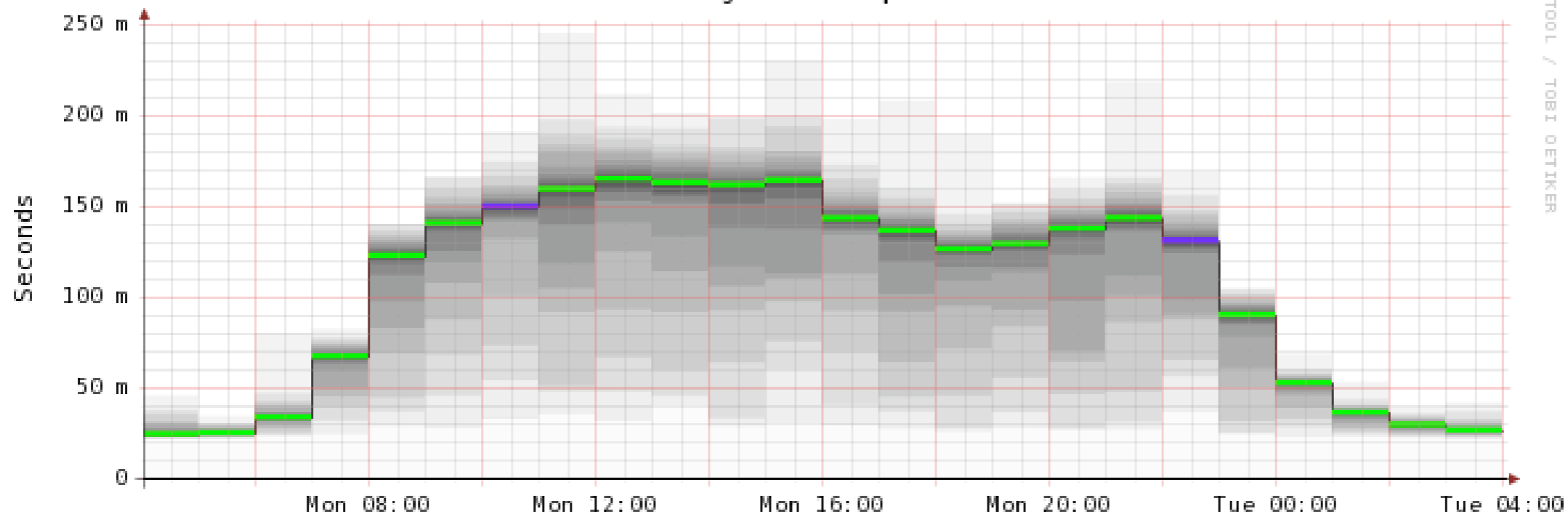
- 🔶 **Lets take a look at VG Nett today...**

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VG Nett today

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VG Nett today

⬡ **12 Squids gives this picture (3rd party measure)**

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VG Nett with Varnish

Wanna guess when we tested Varnish?
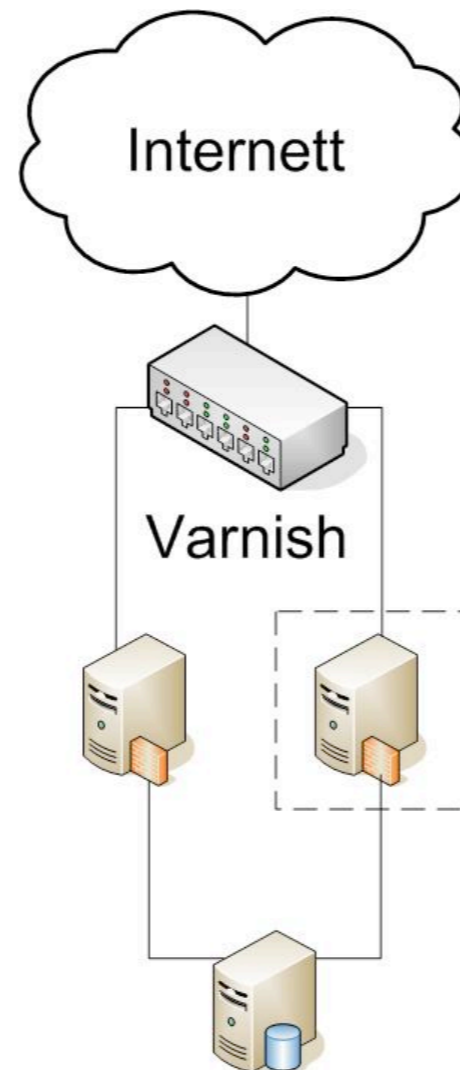

Navigator Graph
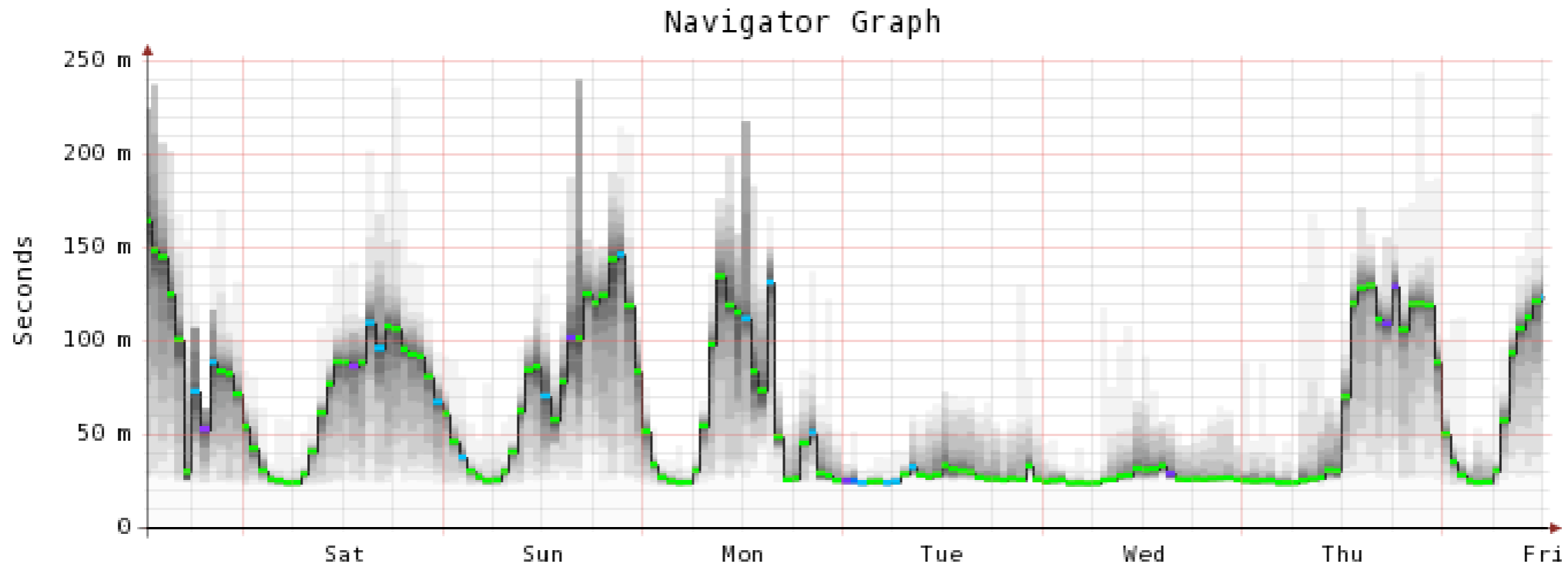
Median Ping RTT (57.8 ms avg) ■ 0 ■ 1/20 ■ 2/20 ■ 3/20 ■ 4/20 ■ 10/20 ■ 19/20
Packet Loss: 0.72 % average   19.59 % maximum   0.43 % current

Probe: 20 HTTP pings using echoping(1) every 300 seconds   created on Wed Sep 20 12:26:27 2006

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VG Nett with Varnish

This was the test-setup. 1 Varnish, 1 backup.

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Poul-Henning Kamp

♣ **Wikipedia: http://en.wikipedia.org/wiki/Poul-Henning_Kamp**

♣ **Poul-Henning Kamp** (sometimes known as *PHK*) is a Danish FreeBSD developer, responsible for implementation of the widely used MD5 password hash algorithm, a vast quantity of systems code, including the FreeBSD GEOM storage layer, GBDE cryptographic storage transform, part of the UFS2 file system implementation, FreeBSD Jails, malloc library, clock/time code, and the Beerware license.

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1980 computer design

- ⬡ **CPU**

- ⬡ **Internt lager (RAM)**

- ⬡ **Externt lager (Disk)**

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1980 operating system

- Open/read/write/close file

- Allocate/free memory

- Send/Receive byte on network

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2006 computer design

- Multi-core / Multi-socket, MPP, NUMA

- Paging, mapping & protection, IO-MMU

- L1, L2, L3 caches, Write Buffers

- Frontside Bus, HyperTransport, NorthBridge, PCI

- RAID, SAN

- IP/TCP checksum offloading

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2006 operating system

- We keep emulating a 1970 computer

- While we have at disposal

    - Virtual Memory, Zero-copy

    - Scatter/Gather I/O

    - Kqueue, epoll, sendfile, accept filters

    - SMP, 1:1/1:N/N:M threading

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Road ahead

- Continue development. This is the start, and we have ideas.

- Get the product out.

- "Success" will determine. That's Open Source.

- Write spec for Varnish 2.0

    - ESI

    - Compression

    - What do people need? What does ? need?

    - Let the snowball roll.

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Thanks for your time! www.varnish-cache.org

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