

## Karl Kleinpaste

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**Objective** Seeking a position where my skills and experience in computer science and project leadership can be put to best use, notably but not exclusively involving expertise in networking, C/C++/Perl, UNIX/Linux environments, and object-oriented development.

**Experience** Full-time positions, plus significant free-lance contracting and consulting appointments.

- 2011-present: Ansaldo STS. Senior Software Engineer. A-STIS is the former Union Switch & Signal, builders of railroad switching systems. Responsible for next-gen switching development, esp. in areas of train/track authorities and inter-system (inter-vendor) communications issues.
- 2009-2011: OTRS. Senior Software Engineer. OTRS is Open Ticket Request System, a German firm to manage the commercial side of the Perl-based, object-oriented, open source trouble ticket management software by the same name. [a] *Project technical lead on a team of 6 Perl engineers* for new SaaS (software as a service) development, by which MySQL-managed OTRS VM installations are made available on a colo server farm; see <http://www.otrsondemand.com/>. [b] *Production of custom feature Perl packages* beyond base system for large financial/industrial concerns (e.g. DWP Bank, Lanxess). Position was entirely telecommuting (co-workers in Germany) except for periodic "close contact" development events in Germany.
- 2007-09: Conviva. Member of Technical Staff. [a] "NAT check" software (C++) for peer-to-peer Internet video delivery, regarding client compatibility via NAT connectivity: port pass-through reachability, bandwidth limits, and interconnect facilitization w/DNS-like locator; [b] coding + management + tuning of Hadoop, a

Java-based "cloud computing" platform, by which to process client heartbeat data for quality metrics, network performance, source data reliability, and other statistics, used in an interactive summary display for video-sourcing customers to show success of their properties' delivery.

- 2005-07: ECI Telecom, Senior Software Engineer, Data Networking Division, producing high-capacity routers. Next-gen ARP re-design & implementation for distributed internal notifications & next hop determination. Requested temp assignment w/Customer Engineering Team, for wider exposure to device capability and understanding of customer. All software in C++.
- 2005: Maya Design. Senior Research Engineer: "Shepherd" repositories in Maya's "information commons" concept. C++.
- 2002-05: *Personal business development*. Linux routing mechanisms, exploring structure for genuine wire-&router Internet anonymity via exaggerated VPN, using Linux' lesser known, more unusual capabilities.
- 2002: TimeSys. Senior kernel engineer in real-time features. POSIX message queue implementation & benchmark analyses.
- 2000-01: lolite Media. ISP startup; infrastructure & mail/news clients.
- 1996-2000: Justsystem Pittsburgh Research Center. Research Programmer. Textual keyword analysis & summarization; email discussion threading; specialized spiders; database interfaces to long-term personal histories.
- 1995-96: Lycos. Senior Product Development Engineer. Web servers & search engines; Netscape's NSAPI; meta-operator interpretation; host aliasing; network superstructure; Usenet archive search facility.
- 1993-97: CompuServe. Usenet facility,

specification/design/implementation.

1988-89: CompuServe. Internet email gateway, design/implementation.

- 1991-95: Carnegie Mellon University. Senior Systems Programmer, Gigabit Nectar project. OS structures supporting intelligent, very-high-speed network interfaces: Outboard buffering and checksumming. See Publications below.
- 1987-91: Ohio State University, Computer & Info Science Dept. Senior Research Programmer. Sysadmin of central services machines. OSU hostmaster. CIS postmaster. Co-development and beta-test of new network software w/Pyramid. Newsmaster, including development & debugging of high-performance relay software.
- 1984-87: AT&T Bell Laboratories. Member of Technical Staff. UNIX kernel support, distributed CPUs. Ethernet, message systems, system profiling & tuning. Low-level "maintenance layer" application support.

Routine involvement in "public service" efforts (now "open source software").

- 2005-present: *Xiphos* Bible study system. Project lead/administrator, guiding a team of a half dozen C/C++ programmers and herding another dozen translators of the interface. See <http://xiphos.org/>.
- 1999: *INN v2*, keyword-scan index support.
- 1996-2005 *CIPE* (Crypto IP Encapsulation); see personal business development above (now using OpenVPN).
- 1992: the first *generalized anonymous mail server*, a derivative of which ran on *anon.penet.fi*;
- 1988-present: *Gnus* (Emacs-based newsreader), email handling support, numerous other facilities e.g. keyword scoring;

- 1987: *smail 2.x*, an intelligent UUCP mail transport.
- 1986-87: first *GNU Emacs port* to UNIX SysV.
- 1985: *Job control facilities* in early UNIX SysV.

## **Education**

- 1987: Ohio State University, Columbus, Ohio.  
Master of Science, Computer & Information Science.  
Thesis: *Structural and Performance Improvements to Peripheral Interface Software*.  
Thesis advisor: Karsten Schwan, now of Georgia Tech.
- 1981: University of Wyoming, Laramie, Wyoming.  
Bachelor of Science, Honors in Computer Science.

**Publications** Kleinpaste, Steenkiste, and Zill, *Software Support for Outboard Buffering and Checksumming*, **Proceedings of ACM SIGCOMM '95**, August 1995, Cambridge, Massachusetts, p.87.

**References** Available on request.