Dave Täht

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SUMMARY

Deeply experienced in all aspects of high speed networked Linux based embedded systems. 23 years experience with Linux and 34 years of "Unix". Architect of enterprise-wide Linux/Unix systems and networks. Lead engineer/Project manager, multiple teams, of embedded products that shipped.

EXPERIENCE

Jan 2011 - Present   Co-founder   Bufferbloat.net

Assembled a worldwide team of researchers, coders, and industry experts to solve the global 'bufferbloat' problem. Ran the "CeroWrt" Project and "Make-Wifi-Fast" projects. Was an invited guest researcher at the Lincs Lab (in Paris), as well as at Karlstad University in Sweden. Comcast Research Innovation Fund recipient. GFiber subcontractor. Contributed code, theory, articles, talks, engineering, QA, servers, project direction, and whatever else was needed to speed up the edge of the Internet. The solutions derived reduce network (and now Wi-Fi) latency and jitter under load by several orders of magnitude, and are rolling out widely in new products across the world as part of the mainline Linux kernel and BSD.

2007 - Present   CTO   TekLibre, LLC

Embedded hardware development, IPv6 research and development, wireless and network research. Worked on the IP04(blackfin), the mesh potato(MIPS), cerowrt(MIPS), OLPC(ARM). Designed, tested and deployed OpenWrt based 802.11an mesh networks near San Juan Del Sur, Nicaragua, and multiple additional later testbeds throughout the world.

Worked on general power management/distribution and internet deployment problems in 12 countries with weak infrastructure.

2005 - 2006   Programmer   Timesys

PPC/arm board bringups, EABI toolchain bringup, realtime Linux kernel, Trailblazer satellite's realtime USB system.

2003 - 2005   VOIP   MyBizOffice

Worked on voip call center applications using the open source pbx "asterisk", with apache+postgres. Developed stand-alone ip-pbx product (asterisk on Xscale) for an aircraft - did kernel/userspace ports, board-bringup, etc. Optimized Centrix IP pbx services on a wireless metro area network.

2000 - 2003   Member, Engineering Staff   MontaVista Software

Created the MontaVista Graphics product – cross-ported 9 million lines of C and C++ code for X11 graphics and sound to MontaVista Linux on 16 ARM, PPC, MIPS, and x86 variants on devices ranging from handhelds to rack mounted fault tolerant servers. Parallelized cluster build system to cut build turnaround time by 16x.

Helped make embedded Linux the reality it is today, from a standing start. Worked on toolchains, hardening, power management, code shrinkage, device drivers, video framebuffers, and multiple pre-iphone-era handhelds, phones and airline seatbacks.

PRIOR EXPERIENCE

1999-2000 Acting VP, Sustaining Engineering, Mediaplex, Inc.
1996-2000 Chief engineer, PicketWyre Labs
1994-1996 VP, Technical Stuff, ICANECT.NET ISP Miami, FL
1992-1994 PicketWyre Labs, Santa Cruz, CA
1991-1992 Senior Engineer Borland International (Interbase), Scotts's Valley, CA
1989-1991 Open Desktop Support Engineer, Santa Cruz Operation, Santa Cruz, CA
1986-1989 Manager, Applied Computer Automation, Westville, NJ
1983-1986 Software Engineer, AIS, Somers Point, NJ

EDUCATION

University of USENET: 9/1983 – 9/1993

MEDIA AND PUBLICATIONS

"Fighting the bufferbloat: on the coexistence of AQM and low priority congestion control"
- Gong, Rossi,Testa, Valenti, Täht, in Computer Networks, 2014, INFOCOM, 2013

"Ending the Anomaly: Achieving Low Latency and Airtime Fairness in Wi-Fi"
- T. Høiland-Jørgensen, M. Kazior, D. Täht, P. Hurtig, A. Brunstrom, USENIX ATC, 2017

"On improving home routers"– D. Taht, V.Cerf, others, before the Federal Communications Commission

"FQ_CODEL IETF Internet Draft" - T. Høiland-Jørgensen, P. McKenney, D. Taht, J. Gettys, E. Dumazet

Instigator of the IETF AQM working group. Contributions to RFC7567, RFC8034, RFC7928, RFC7806, RFC8033, and the Codel IETF Internet Draft. Contributions to the Homenet and RMCAT working groups.

Congestion Control Journal, Linux Journal, Linux Weekly News, SCO Magazine, Postcards from the Bleeding Edge, Arlan Wireless Howto.

Talks at Stanford, MIT, University of Modena, UKnof, RIPE, Battlemesh on YouTube.

CURRENT SKILLS

C (gcc, gdb), SQL (Postgres), on X86_64, ARM, & MIPS architectures, on OpenWrt/lede, Debian derived Linux OSes. Linux kernel. Git. Emacs. Toolchain internals. Familiar with most internet protocols, including many obscure ones. Various congestion control algorithms. Deep knowledge of queue theory, Wi-Fi and the babel distance-vector routing protocol. Too many old architectures, operating systems, concepts, and languages to list.

OPEN SOURCE CONTRIBUTIONS

Patches to codel, sch_cake, and fq_codel in the Linux kernel. Contributions to ns2, ns3, flent, ardour, CeroWrt OS, openwrt/lede, babeld, and others. Co-inventor of the first Linux based embedded wireless routers.

CHARITABLE ORGANIZATIONS

Board member, 2012-2016 Internet Civil Engineering Institute
Board member, 2016-2017 Commons Conservancy

INTERESTS

Piano, guitar, audio production tools, hardware design, embedded systems, surfing, bicycling, other cultures.