



Tim Kehres

Internet / IoT Design, Consulting and Education


About Me

Am passionate about building usable real world solutions. This applies to electronics, systems, network engineering, education and business. It's all about balance!

Have been teaching and helping students from primary through adult since 2010. During this time I have continued to build online collaborative tools for education design to help in the teaching of language, critical thinking, electronics and programming skills to young students.

I'm a US citizen and Hong Kong permanent resident currently living in Shenzhen, China. Have worked in the USA, Germany, Hong Kong, Macau, Japan, China and the Philippines.

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Successful track record in the design and implementation of cutting edge systems and applications. Able to combine market / financial research with technology to establish sound and profitable business strategies. Accomplished manager with International experience spanning the USA, Europe and Asia. Current work focuses on STEM / IT training and tools and our supporting datacenter services.

Electronic and Software Design

Started my career building microcontroller solutions based on the Intel 8748 (assembly coding plus circuit design) and then expanded to systems and network design. Currently working with IoT (Internet of Things) devices (both hardware and software) based on the Raspberry Pi, Arduino series, ESP32 and others.

System and Internet Engineering

Moved to the Silicon Valley in the early 80's working for startups building the first microprocessor based Unix computers and later the first company building commercial TCP/IP solutions (the network component which led to the Internet). After that I worked for the Lawrence Livermore National Laboratory where we did applied research and development in Internet applications (mainly email based). Moved on from there to do general network consulting and started my own company, International Messaging Associates, which built some of the first MIME compatible electronic email solutions on the market. Our customers at the time included many of the fortune 500 companies and large government organizations. Helped organize the consortium and built the new Macau Name Registry (failover across 2 datacenters). Also worked with International standard organizations including IFIP, the IETF and NIST during this period.

Education and Training

Extensive experience with technical writing, followed by training and tutoring through my IT work. While running my own company this occupied well over half of my workload for several years. This experience was extended starting in 2010 when I started to tutor students (primary age through adult) resulting in a shift in my systems engineering work to include direct teaching and educational / learning systems development.

Have provided tutoring for students from primary through adult in the areas of English, Critical Thinking, Math, Science and Business while continuing to build the teachers-network site. This is an collaborative environment for the creation and maintenance of open source curriculum frameworks with special emphasis on STEM and computer science training. Future work is planned to include LMS, software development tools, and electronic design tool integration.



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TECHNOLOGIES

Internet

DNS / DHCP

Email (all)

IP Routing

LDAP

VoIP

Languages

Awk / Lex

C/C++

HTML 5 / CSS 3

Javascript

Jquery

Perl

PHP

Python

Scratch

Unix / Linux Shell

System

Database / SQL

H/W Architecture

IP Firewalls / Security

Linux / UNIX

Network Architecture

Network Management

Network / System AI

SIEM

Web

Moodle

WordPress

EDUCATION

Bachelor of Science,

Electrical Engineering,

Minor in Computer

Science, Purdue University

Additional Areas of Expertise

Applications / Tools: Sugar CRM, Sendmail, Postfix, Mailman, Kannel, Apache, phpBB, ipchains /iptables, Squid, AltiWare (AltiGen), TeleVantage (Artisoft), Asterisk, Jabber (XMPP), WordPress, BIND, Zabbix.

Standards: All Internet email related, most SNMP related, routing (BGP, EGP, etc), DNS, X.400, X.500, ASN.1, SMS, LDAP, HTML 5, CSS 3, DHTML, XHTML, XML, DOM, Voice over IP (SIP/IAX/SCCP), SMPP.

Operating Systems: Most major Unix (and related) releases over the past 40 years, including many current Linux distributions (Ubuntu, Fedora, RHEL, OpenSUSE, CentOS, Mint, Raspbian), Microsoft (through Windows 7), Citirix Metaframe 1.8.

Office Tools: Microsoft Office, LibreOffice, FrameMaket, Acrobat, PhotoShop, GIMP, GnuCash.

Systems: Many over the years from 70's era minicomputers (UNIX, DEC, VM), through most modern Linux (x86, ARM, etc). Also work with popular microcontrollers such as the Arduino series, ESP 32, etc.

Publications

Web Sites

Jade Connections – <https://jade.net> (2018)

Teachers Network – <https://teachers-net.com> (2020) – all public content

International Messaging Associates (2003 archive) – <http://ima.jade-networks.com> (all technical manuals and release notes).

International Standards

T. Kehres, **Message Handling Systems Interoperability Problems Between 1984 and 1988 X.400**, *Message Handling Systems and Distributed Applications*, pp 553-561, North Holland (1989)

T. Kehres, M. Westbrook, **MHS Gateway Working Group Report**, *Message Handling Systems and Distributed Applications*, pp 551-552, North Holland (1989)

Writing Samples

A comprehensive collection of writing samples can be found on the Jade site at (<https://jade.net/writing>) in the Sample Documents section.

Active Projects



Jade Connections
jade.net



Tim's Place
tim.kehres.com



Teachers Network
teachers-network.com