

CHOU, CHI-BIN

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Taiwan (R.O.C.)

EXPERIENCE

ALPHA Networks Inc. -

Sep. 2013 - Sep. 2016

INNDA Networks Inc. -

Oct. 2016 - Present

- Designed and implemented these function models, Layer2Bridging, Firewall, LAN and WAN connection, fully according to CWMP TR098 or TR181 specification from scratch. All CPE product need to follow CWMP specification to implement function. Once I complete those functions, these companies also can apply these functions on others CPE product.
- Responsible for all DHCP, IGMP, IPv6 and IPsec relevant issues. I am very familiar with DHCP, IGMP, IPv6 and IPsec protocol. I customize some functions on open source code.
- I am familiar with GDB. These company have core program which includes many features, each engineer will modify it. Which will cause the main program has problems while integration. I usually use GDB to review code and fix these issues.

ACADEMIC PROJECTS

ARM CPU - Cortex-M3

- Understand ABI operation of ARM Cortex-M3. Using ABI to implement these OS functions, such as Multitasking, Context Switch, Preemptive, Timer Interrupt and Threads, on ARM Cortex-M3 CPU. Due to it uses usually ARM CPU on RTOS system, I decide to learn this one.
- Knew to use CP15 register to control cache, MMU and TLB on ARM Cortex-M3 CPU [1]. When OS activate context switch, it needs to flush cache and TLB, and assign new process's page table to MMU via CP 15 register.
- PikoRT [2]
PikoRT is developing base on ARM Cortex-M3 CPU. [3] is my study report about this operation system.

Operation System -

- Linux Kernel
 1. Good at Linux networking system, i.e., netfilter, bridge and routing. I did some customization functions on Linux net core. Like host and dynamic port mapping function according to CWMP TR098 specification.
 2. I am having basically concept of Linux memory system. MMU translate virtual memory to physical memory according to page table; TLB improve MMU performance; cache reduces cache missing and memory accessing to enhance system effect.
 3. Familiarity with ELF format, GDB and binary tools. It makes me can deeply analysis bug and performance.

Blockchain - IOTA

- Understand IOTA basic concept. I built a private IOTA test net for practice. I wrote an IOTA ATM [4] for fun.

LEADERSHIP EXPERIENCE AND ACTIVITIES

Training the novice - No programing and networking background

- Spent 1 year to lead she is understanding company's compiling system, company's firmware system and basic networking concept. she has right concept, she can analyses and fixes issues independently now. her ability is same as the engineer which have experience of two or three years. She is irreplaceable asset for the company now.

EDUCATION

Feng Chia University

Computer Science, Master

Sep. 2013

REFERENCES

- [1] ARM infocenter. <http://infocenter.arm.com/help/index.jsp>
- [2] PikoRT. <https://github.com/Piko-RT/pikoRT.git>
- [3] PikoRT report. <https://github.com/manbing/testbed/blob/master/documents/PikoRT%20report.pdf>
- [4] Private IOTA Testnet. <https://github.com/manbing/private-iota-testnet/tree/master/practice>