x86 Emulation on ARM devices, and Wine on ARMhf ExaGear-Desktop

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　OSC Kyoto, OSC Tokyo, KOF,Taiwan COSCUP

Tokaido Linux Users' Group LT
2015/6/13 13:00~
Place：Hamamatsu
鴨江アートセンター 206

Speaker：
Kapper

Self Introduction

- My name: Kapper
- Twitter account：@kapper1224
- HP：http://kapper1224.sakura.ne.jp
- Slideshare:
- My Hobby：Linux、*BSD、and Mobile ARM Devices
- My favorite words：Record than experiment important
- Test Model：Netwalker(PC-Z1,T1)、Nokia N900、DynabookAZ、RaspberryPi
  Nexus7(2012、2013)、Hercules eCAFE EX HD、Jetson TK-1、
  OpenPandora、ARM Chromebook、ZTE OPEN C（FirefoxOS）
  台湾Android電子辞書 無敵CD-920、CD-928

- Recent Activity：
  Netwalker on the Linux from Scratch.

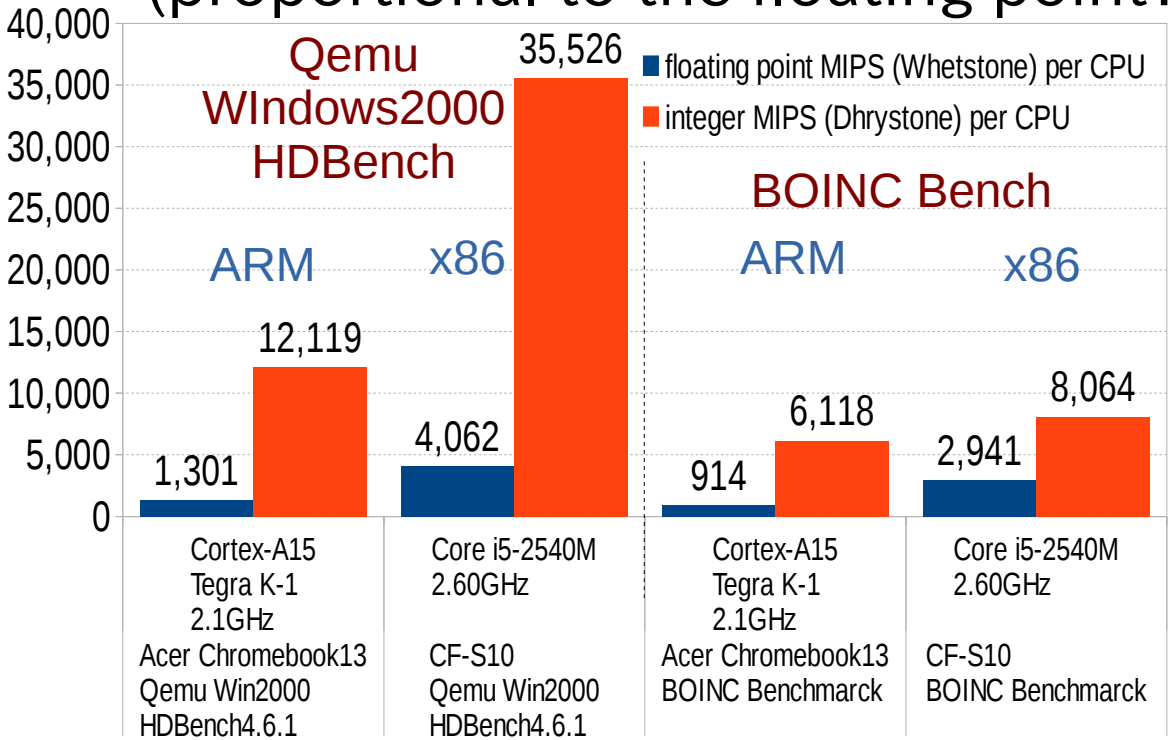
  Hacking of Android Nexus7.

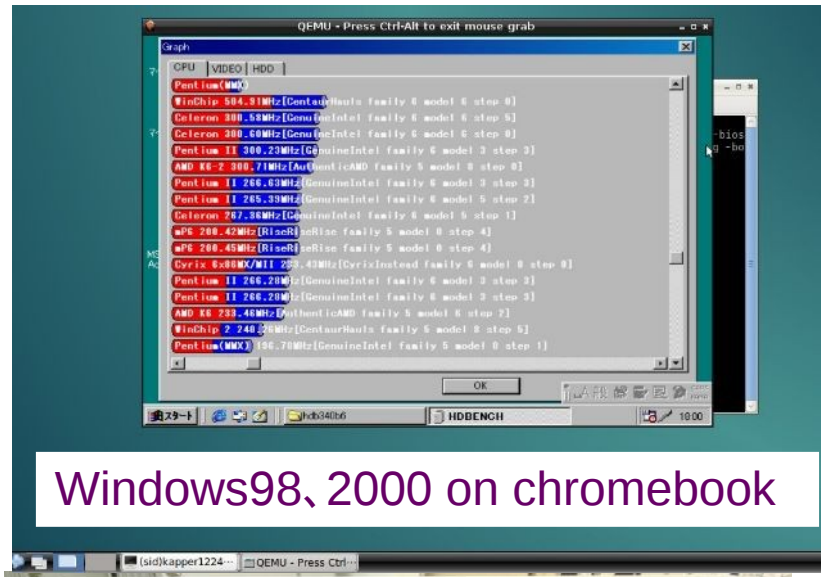
  I have recently often use the ARM Chromebook.

X86 Emulation on ARM Linux Devices

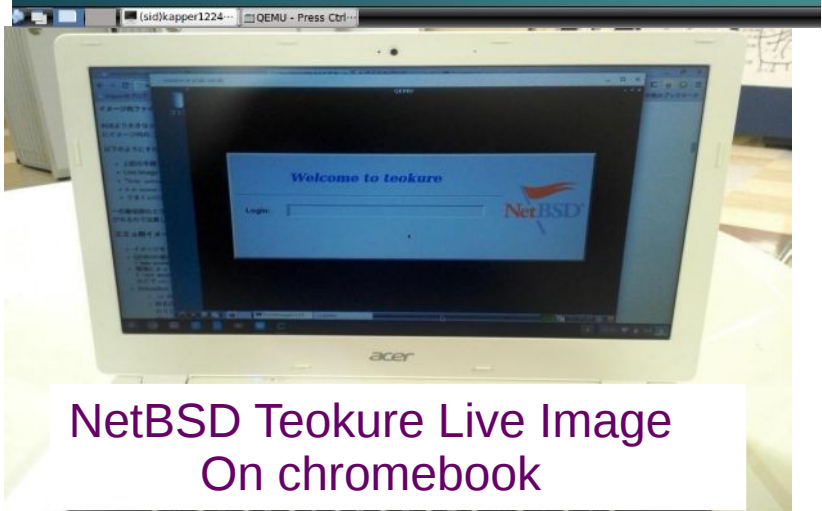
x86 Qemu Emulation on ARM devices

- You can use the x86 emulator will be like can be moved and Wine Windows apps and Steam and Skype.
- The x86 emulator also works such as Windows and NetBSD. TegraK-1 in Using Qemu Pentium2 266MHz equivalent Win98 is in HDBench, it was to use and Pentium4 1.8GHz equivalent to ExaGear-Desktop.
- In ARM Devices,Qemu is x86:ARM=3:1 (proportional to the floating point?)





Windows98、2000 on chromebook

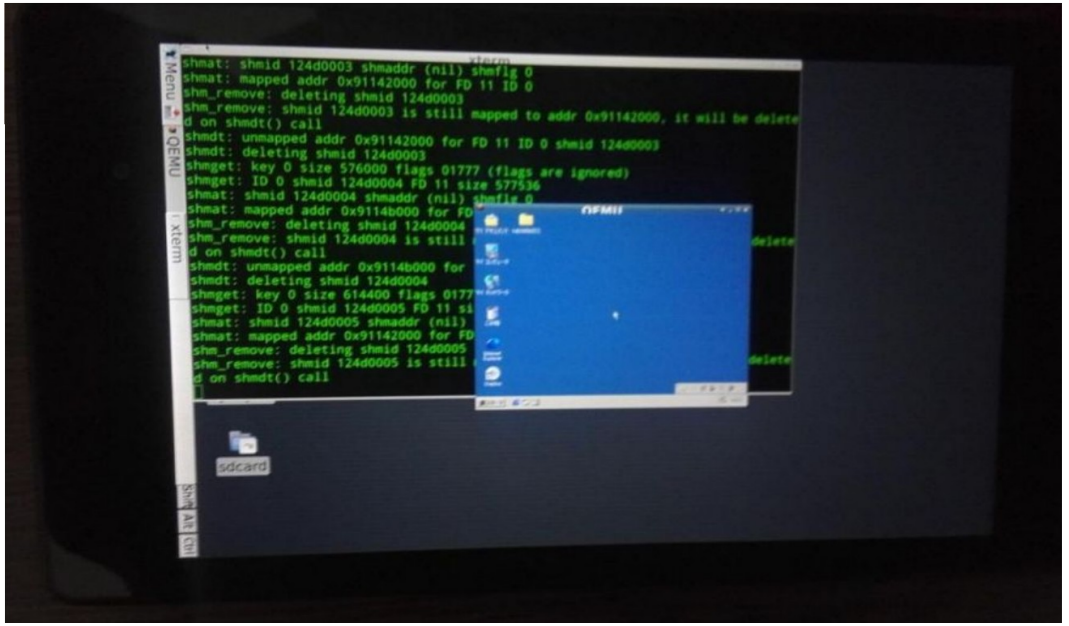


NetBSD Teokure Live Image
On chromebook

x86 Emulation on Android

- You can operate the Windows or NetBSD by the use of Android even x86 emulation
- PC: Bochs,Qemu,DOSBox,Linbo PC emulation MAC:vMacMini
- In the case of Qemu、Windows and NetBSD, and the others operation.

Windows9x、2000(Qemu) on Nexus7

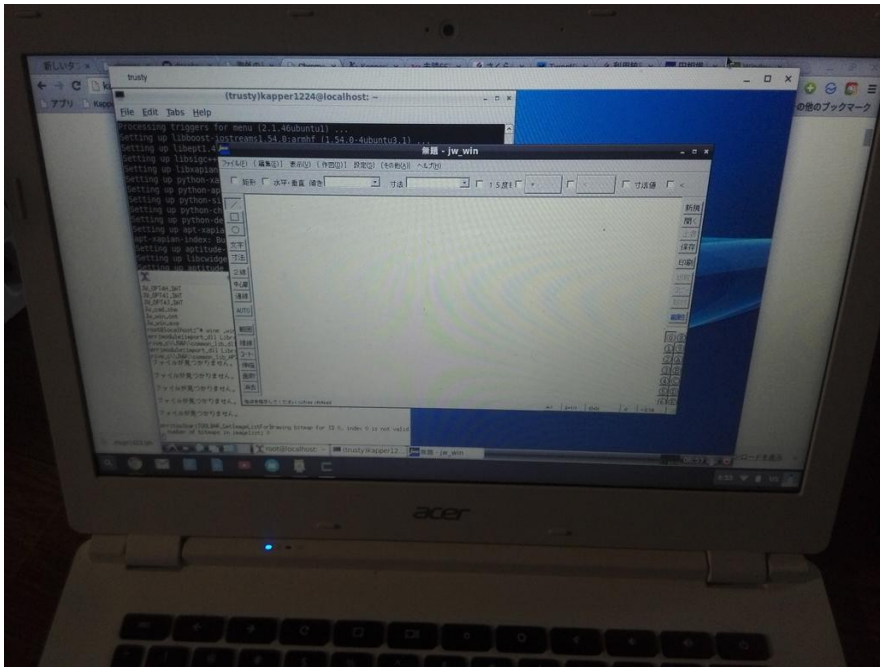


NetBSD Teokure Live Image(Qemu) on Nexus7

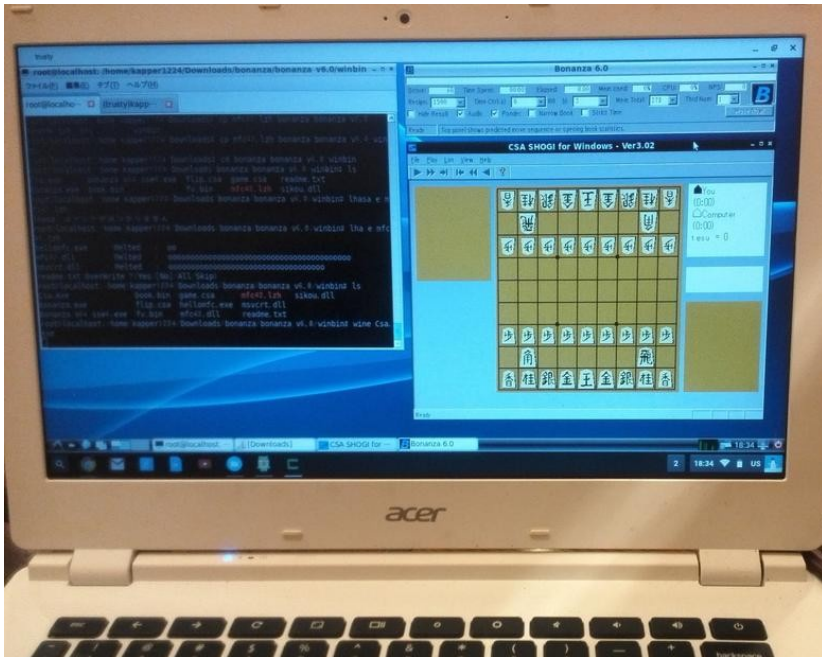
x86 Emulation on ExaGear-Desktop 1 board PC, and ARM Chromebook

- ExaGear-Desktop is 4.5 times faster than qemu.
- i686 Ubuntu12.04LTS on ARMhf Ubuntu 14.04,12.04
- Boinc Benchmarchs:@ ARM Chromebook CB5-311 TegraK-1
  Integer points (ARMhf Base) : 6118 ⇒ (i686): 1800 29.4%
  Flotings points (ARMhf Base) : 914 ⇒(i686): 200 21.9%
  about Pentium4 1.8GHz on ARM.(Qemu =Pentium2 266MHz)
- Windows applications on Wine, on ARM devices.

jw-cad(Wine) on ARM Chromebook



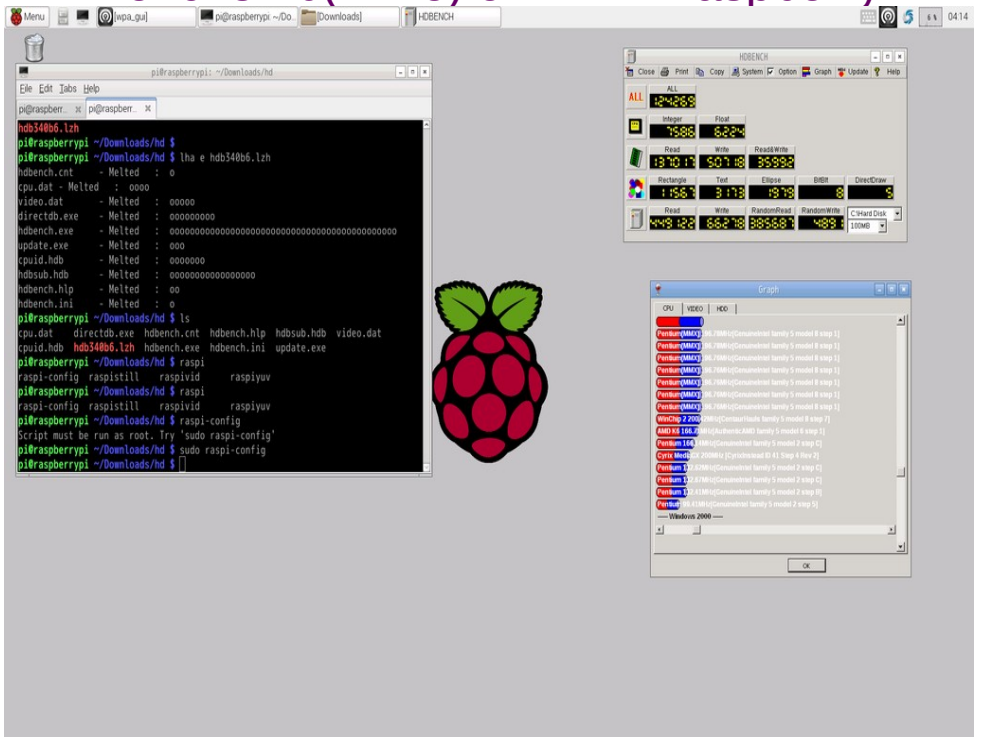
Bonanza(Wine) on ARM Chromebook



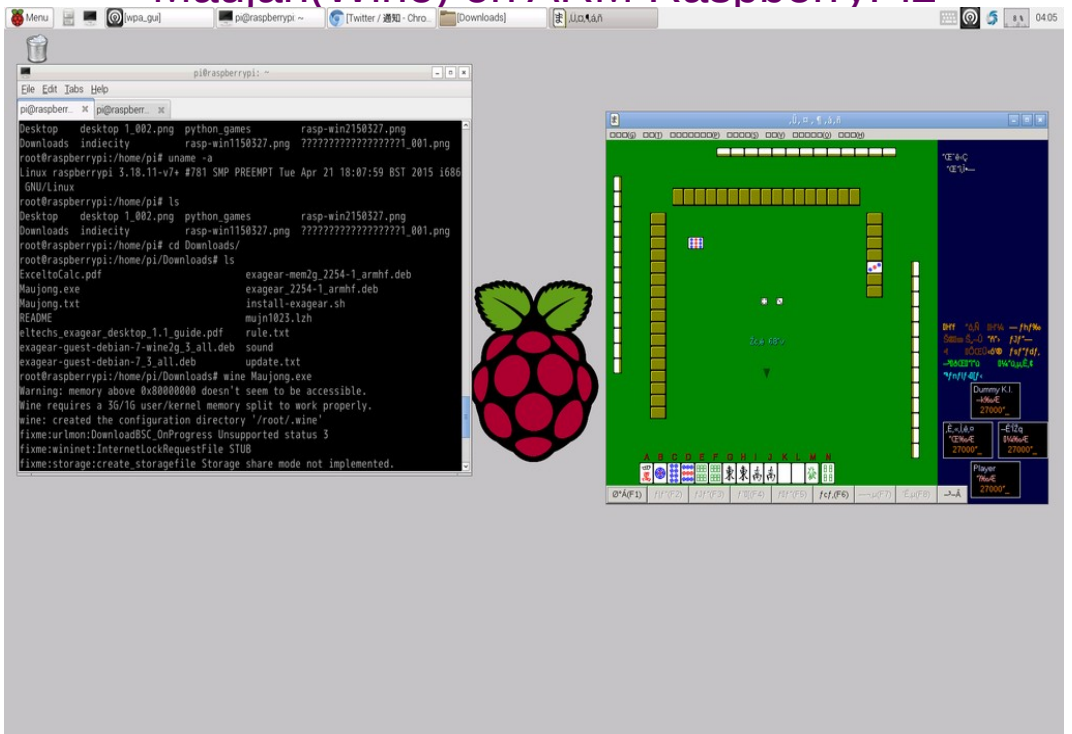
x86 Emulation on ExaGear-Desktop ARM RaspberryPi, RaspberryPi2

- ExaGear-Desktop RaspberryPi is 5 times faster than Qemu.
- i386 Debian7Wheezy on ARMhf Raspbian,Ubuntu14.04,Debian7
- HDBench Benchmarchs:@ ARM Raspberry Pi2
  Integer points (ExaGear i686) : 7586 (Qemu i386: 1999 26.4%)
  Flotings points (ExaGear i686) :6224 (Qemu i386: 384 6.2%)
  about MMX Pentium 200MHz on ARM. (Qemu =Pentium 40MHz?)
- Windows applications on Wine, on ARM devices.

HDBench3.40(Wine) on ARM RaspberryPi2



Maujan(Wine) on ARM RaspberryPi2



Next My Presentation OSC Kyoto、Tokyo、Taiwan COSCUP

- OSCKyoto、Tokyo、and TaiwanCOSCUP
  my exhibition schedule
- Content:OSC Kyoto:Hacking of Android Nexus7
  :COSCUP:Hacking with ARM devices
- OSC Kyoto　8/8
  OSC Tokyo　10/24-25
  KOF(Kansai Open Forum) 11/?
  Taiwan COSCUP　8/15-16
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