Week 1 notes : What is VxWork?

- a proprietary & customisable real-time operating system (RTOS)
- designed for distributed computing on CPUs with embedded systems
- used with a spectrum of hardware eg. communications & network devices

Platform : ① Intel architecture
② Power architecture
③ ARM architecture

- can be used for : ① multi-core asymmetric processing (AMP)
② symmetric multiprocessing (SMP)
③ mixed modes & multi-OS designs

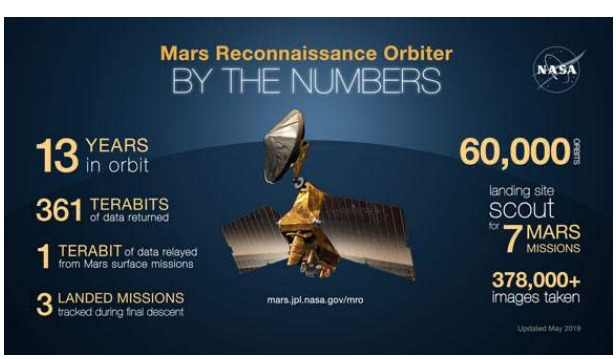
- Features : ① Multitasking kernel with preemptive & round-robin scheduling & fast interrupt response
② Native 64-bit operating system
③ user-mode applications ("real time processes") isolated from other user-mode applications via memory protection mechanisms
④ Human machine interface → Vector Graphics & Tilcon UI
⑤ Graphical user interface (GUI) : * OpenVG stack
* Open GL
* Tilcon UI
* Frame Buffer Driver
* EV Dev Interface
⑥ Networking features with 64-bit support

- Hardware support : ① Intel x86 family
  ② MIPS
  ③ Power PC
  ④ Freescale ColdFire
  ⑤ Intel i960
  ⑥ SPARC
  ⑦ Arm, StrongARM & XScale CPUs

- Notable uses : ① Mars Science Laboratory Curiosity rover

② ASIMO Robot

③ Mars Reconnaissance Orbiter



④ Boeing 747

⑤ Varian Medical Systems Truebeam