

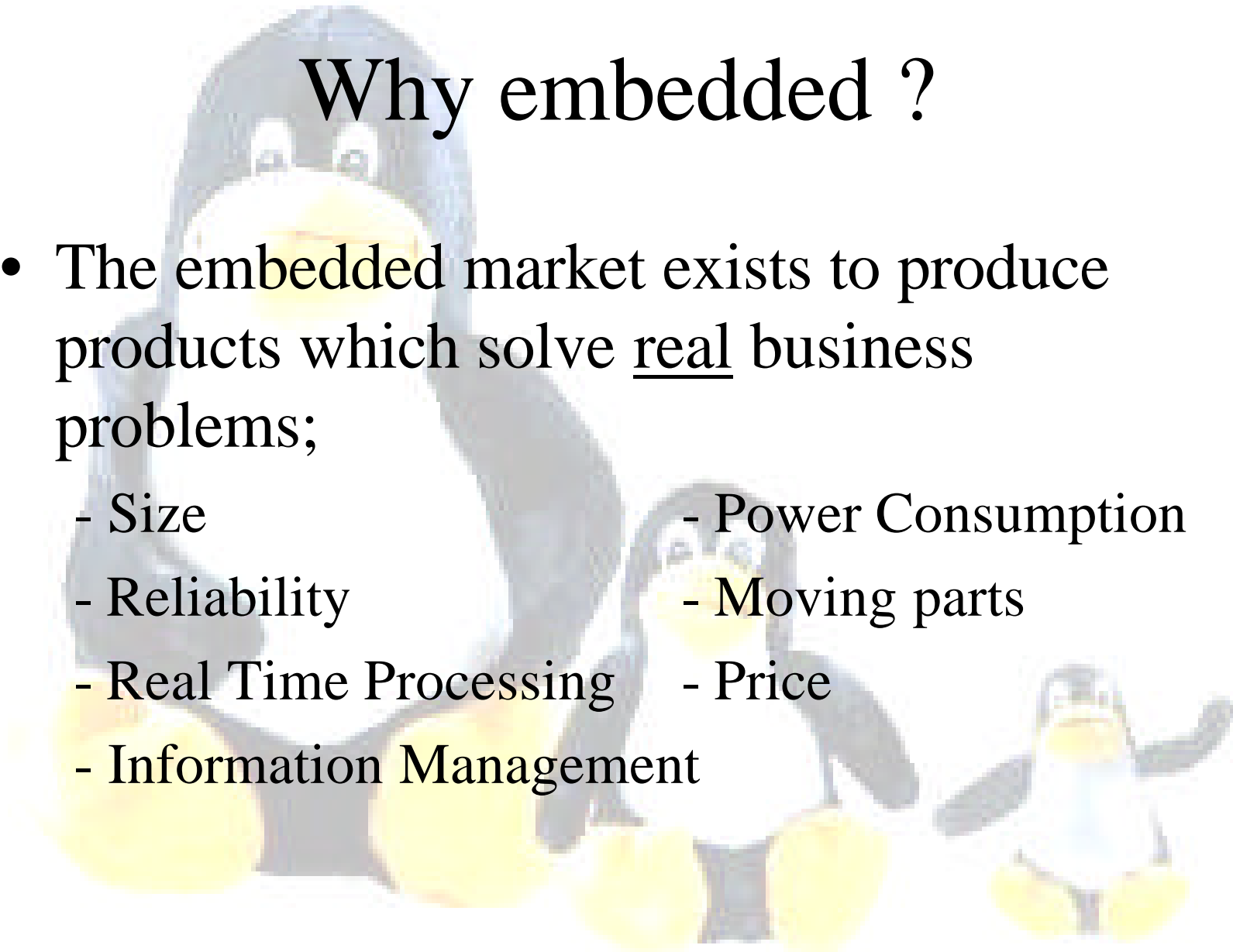
Embedded Computer

What is it????

- Embedded: *To enclose snugly or firmly*
- Computer: *A device that computes, especially a programmable electronic machine that performs high-speed mathematical or logical operations or that assembles, stores, correlates, or otherwise processes information.*
- An “Embedded Computer” is therefore **“A snugly enclosed device that processes information”**

Why embedded ?

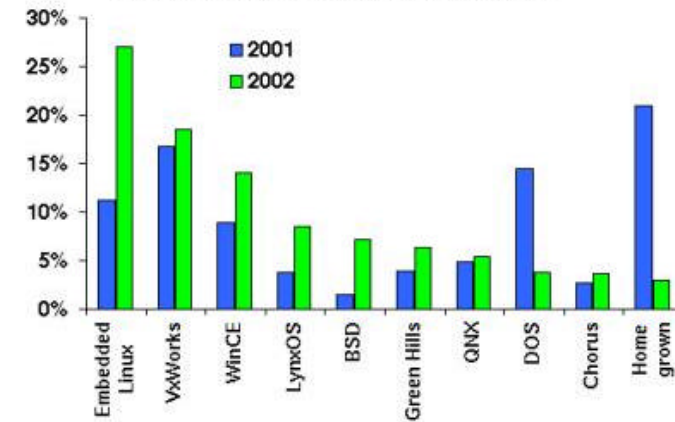
- The embedded market exists to produce products which solve real business problems;
 - Size
 - Reliability
 - Real Time Processing
 - Information Management
 - Power Consumption
 - Moving parts
 - Price



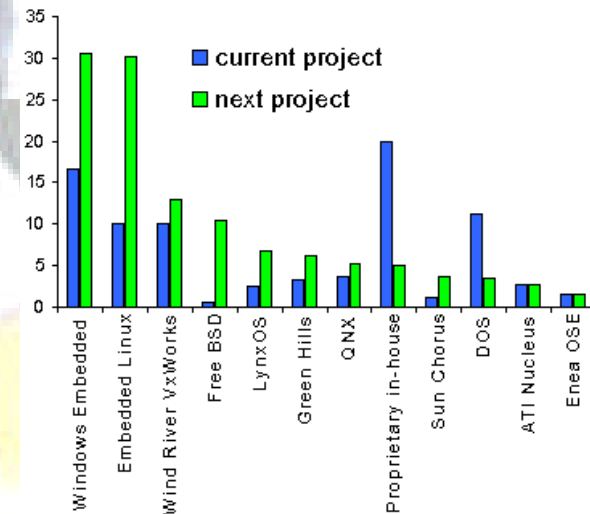
Future growth is OS

- Both Linux and Windows have strong support for future development of embedded applications by developers.

Embedded OS trends 2001–2002, sorted by 2002 expectation
(multiple selections permitted; top 10 for 2002 shown)

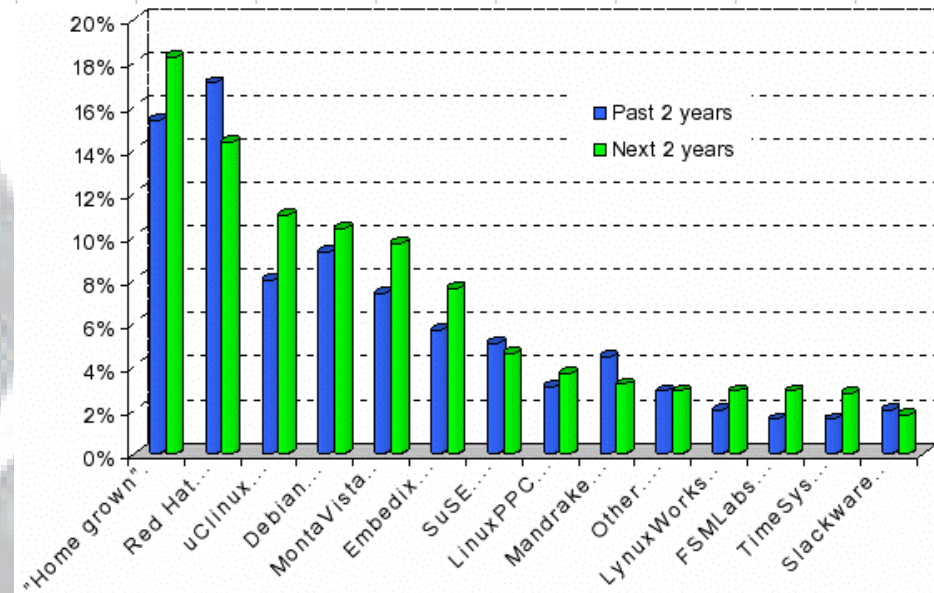


Source: Evans Data Corporation 2001 Embedded Systems Developer Survey



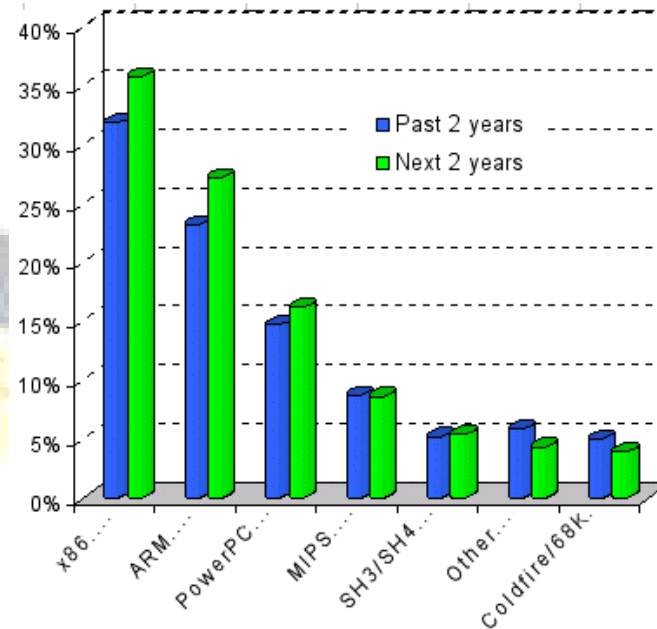
Which Linux Distribution????

- Most popular embedded distribution is “Home Grown”
- Red Hat, uCLinux & Debian follow
- Other Embedded OS Include; Windows, Custom, DOS & VxWorks



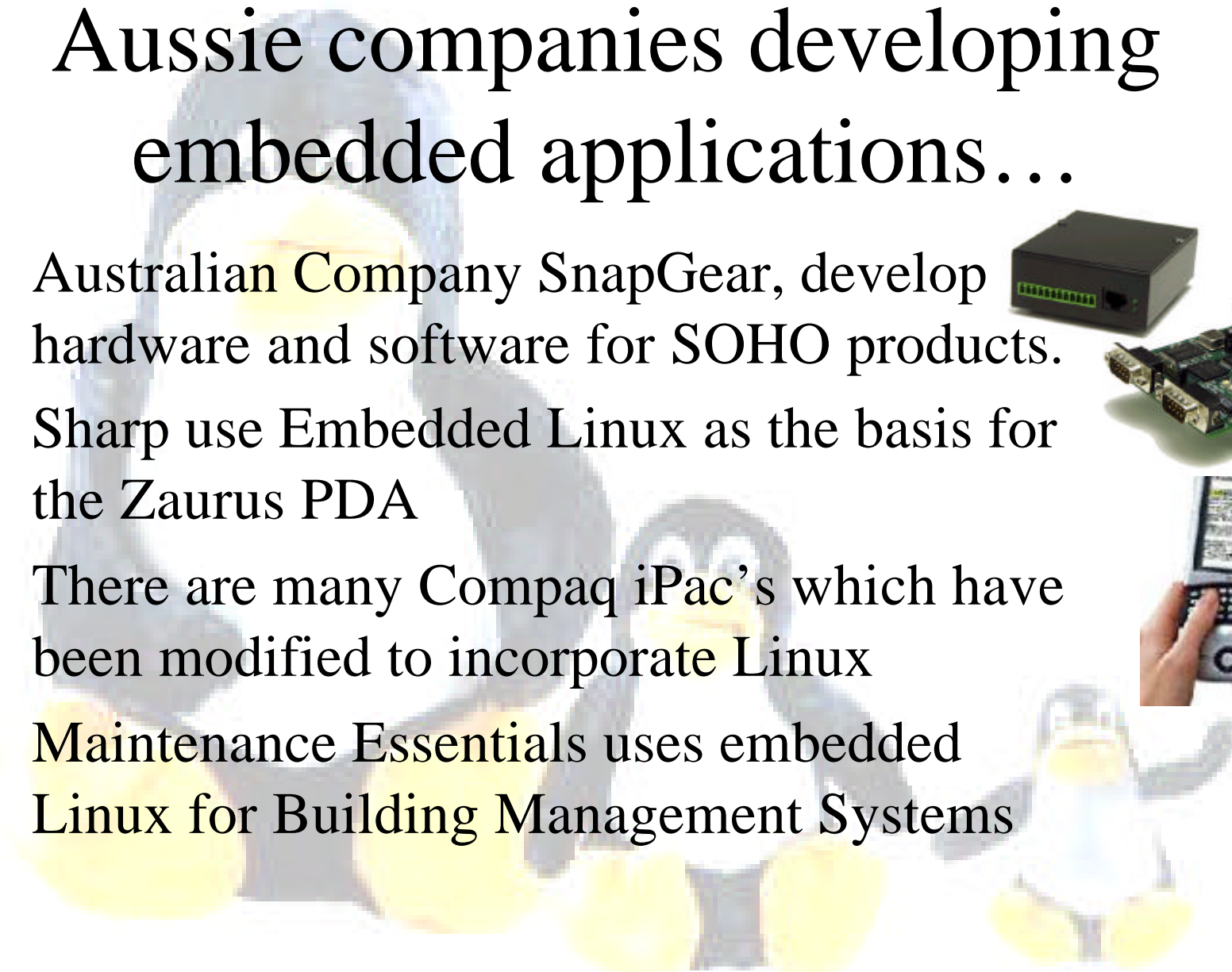
Dominant Processor

- x86 Processors are the most common development platform for embedded systems.
- This is probably because the hardware platforms required for development are readily available.



Aussie companies developing embedded applications...

- Australian Company SnapGear, develop hardware and software for SOHO products.
- Sharp use Embedded Linux as the basis for the Zaurus PDA
- There are many Compaq iPac's which have been modified to incorporate Linux
- Maintenance Essentials uses embedded Linux for Building Management Systems



Where do you find embedded Linux solutions today???



- PDAs and handheld computers
- Communications Equipment/Phones
- Audio/video entertainment devices
- Gateways, servers, & wireless access points
- Robotics
- Small/Micro servers
- Home/Business Automation

Can you make \$\$\$ from embedded Linux applications?

- Why embedded Linux?
- Have an idea?
- Is there an established market for the product?
- Would people pay for the product?
- How much would they pay?
- Can you sell enough to cover your development costs and make a profit?

Embedded Linux Resources...



General/News

- www.embedded-linux.org
- www.linuxdevices.com

Distributions

- www.uclinux.org
- www.redhat.com

Developers

- www.ibm.com
- www.snapgear.com

Newsgroups

- comp.os.linux.embedded

Books

- www.oreilly.com
 - Designing Embedded Hardware
 - Building Embedded Linux Systems