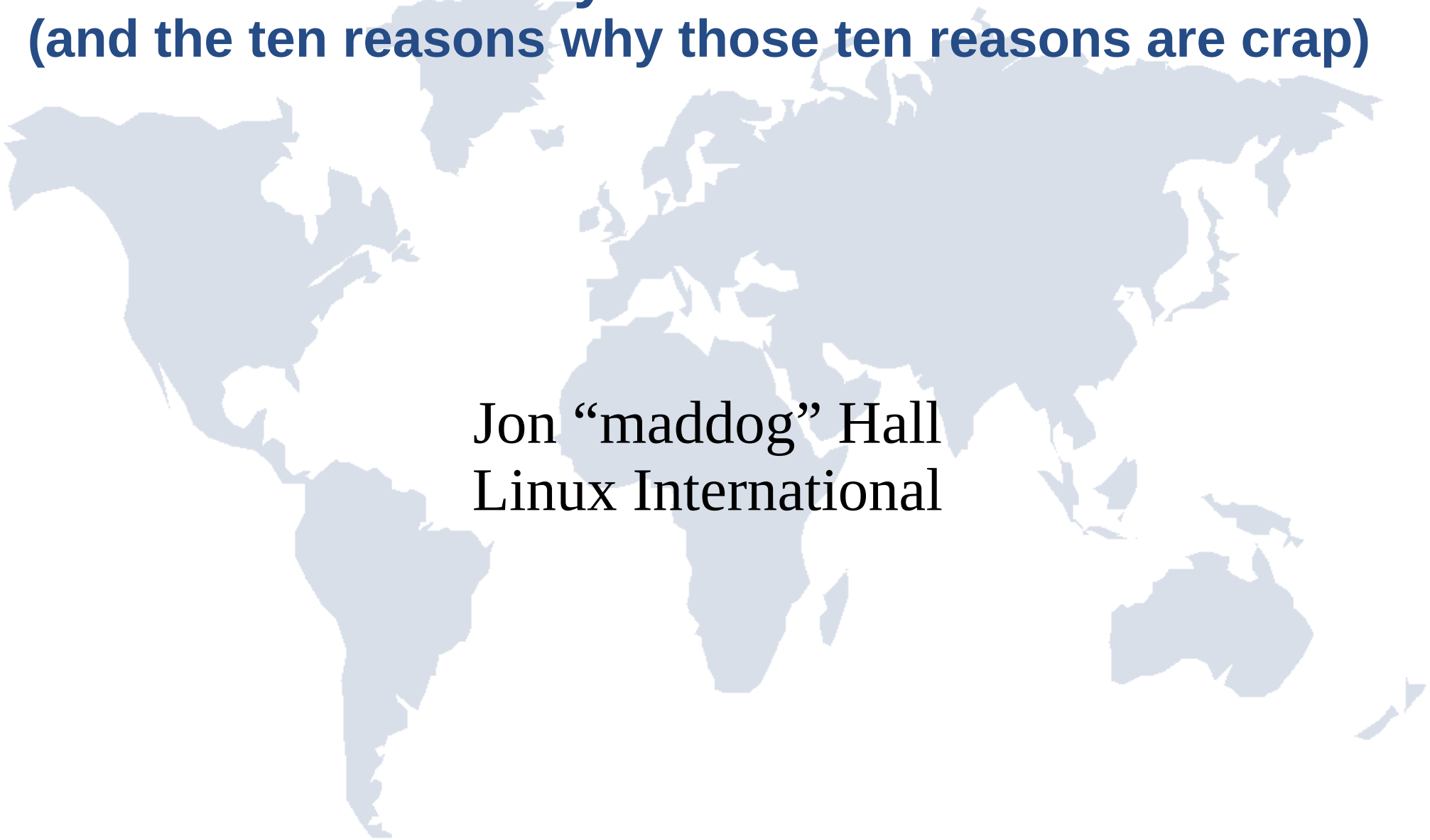
Ten Reasons Why You Can Not Use Linux:
(and the ten reasons why those ten reasons are crap)



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Note:

- John Mashey
- The last time I gave this talk was in 2002

Do you hear these reasons today?

Agenda

- What is Linux?
- Why use Linux?
- Major Objections to Using Linux
- Financials
- Summary
- Q&A

What is Linux? (And why would you care?)

- Multi:
  - User
  - Tasking
  - CPU
- Demand Paged Virtual Memory
- 32/64 bit
- Fully network aware (TCP/IP, NFS, Web)
- File and Printer Serving/Coexistence
- Many utilities, languages
- Resource Stingy

What Is Linux (Cont.)

- Freely Distributable
- Both object and source
- Runs on many architectures (which have different uses)
- Wide range of peripheral support
- Widely Configurable
- Embeddable to SuperComputer

Why Use Linux?

- Low cost solution to high power operating system
- Freely distributable sources allow rapid development of the system
- It is efficient
- No one buys hardware and software
- It allows you to have ***control***

Major Objections: I can't use it.

- Lack of Applications
  - Does not run Office 95, 96, 97,.....
- Too Complicated
  - Too Hard to Learn
  - Too Hard to Use
- Doesn't support Backoffice (SQL Server or Exchange)
- No Decent Middleware (DBMS, Objects)

Applications

- 10000 native commercial applications
  - Many maintenance applications are not needed, such as “defragmentation of disk”
  - Many applications available on distribution
- Thousands more that run under emulation
  - MSDOS emulation (dosemu)
  - Win-32 emulation (WINE), including:
    - MS Office, Quicken, Quick Books, Direct X games
- Thousands more that run under JAVA

Applications (Cont.)

- Web-based applications through HTML5
  - Netscape, Mozilla, Opera, others
- KDE/Gnome
- Office Packages (all run on multiple platforms)
  - Open Office
  - Libre Office
  - Hancom

Layered Products for Running Windows

- www.Win4Lin.com
- Crossover by Codeweavers for MS and Apple
- www.VMWARE.com

Different Markets

- Know the needs of your market.
- See if Linux meets those needs

Education

- Useful for teaching Computer Science
  - Monolithic and Micro-kernel examples
  - All source code included
  - No licensing hassles
  - No ``contamination issues"
- Can be used from grade school to graduate school
- Tailor systems for lower cost (diskless, Volks)
- Lots of low or no cost software, most source

Stone Soupercomputer

- A supercomputer for the average classroom
  - Uses Linux Operating System
  - Can use donated hardware
- ``We start to win when you login....."

Major Objection
Its Too Hard to Learn

- Unix and Linux people brought this on themselves
  - "Unix Elitism"
- Modern day Linux systems GUI driven
  - Need tailoring to meet exact needs
- Train the trainer
- Go for a test ride

Major Objections: Its too hard to manage

- Too Many Ongoing Revisions: Too buggy
- Unprofessional (Graduate Student Code)
- Requires a GURU (Vs Windows or WinNT managed by ``anyone'')
- Poor Features: management tools? High availability?

Too Buggy and Unprofessional

- Professional programmers have coded and reviewed most of it
- Open Development allows for testing of each change by thousands of users
- You are seeing the development cycle which is normally hidden
- WNT V4.0 - ``Build 1381'' more or less buggy?

Requires a GURU

- Modern-day Linux distributions easy to install
  - Typically can be installed/updated over Internet
- Modern-day Linux distributions have graphical system management tools
- Linux can be bought pre-installed
  - ***Maybe this answer is closer than you think...***

The Micro$oft Illusion

- People buy MS systems pre-installed
  - hardware issues ``fixed'' by VAR
  - VAR works from list of ``pre-qualified hardware''
  - BUT try to upgrade it, or even add a printer
- Linux systems are (in my experience) easier

Poor Management Tools

- Desktop Tools Available
  - ``Look and Feel'' of FVWM95
  - Gnome, KDE, Unity (Ubuntu)
- Graphical System Management Tools exist from distribution distributors (Puppet, Chef, etc.)
- ``Clustering'' Tools becoming available
  - Rocks, Oscar
  - Scyld

Major Objections: Not Mainstream

- Unsupported (Who ya gonna call?)
- Only runs on PCs
- No Scalability (Processors beyond 2)
- Everyone is Going with NT Servers
- Risky

Who Ya Gonna Call?...

- Many distributions (Red Hat, SuSE, Ubuntu/Canonical) offer support
  - telephone
  - e-mail
  - Fax
  - Onsite
- mailing lists and archives

Who Ya Gonna Call?...(Cont.)

- Most Large System Vendors supplying support:
  - IBM, HP, Oracle
- Independent support specialists springing up
  - A lot are local
  - See Linux Magazin
- LPI Certification available around the world
  - Over 677 training locations listed

Who Ya Gonna Call?....(Cont.)

- Large body of technical papers and HOWTOs by Linux Documentation Project
- Large number of Linux books on Networking, Systems Administration, Device Driver writing, etc.
- Large number of forums and portals
- Large number of college students who are learning Linux now.....

Yeah, but...

- During ``Ping'' issue, fix to Linux was on net
  Three hours after problem was diagnosed
- Certain ``commercial'' systems did not have a fix out two weeks after the problem was diagnosed
- InfoWeek's Award for Support – 1997, 1998

Only Runs On PCs

- Originally, but ran well on 386 with small memory and disk
- Now runs on Alpha, SPARC, 68K, MIPS, PowerPC, HP-PA, R6000, IBM 390, Caruso, ARM, StrongARM, IA32 and IA64

Does Not Scale Well Past Two Processors

- Originally this was true
- Newest kernel releases scale much better up to twelve (and many more through use of libraries)
- How well does WNT scale?
- Of the 500 fastest computers in the world....

Everyone is moving to Micro$oft Servers

- Everyone is *looking* at M$ servers
  - Some are sorry they did
- Linux is gaining market share of server market (IDC)
- Linux one of the most-used systems (IDC)
- Linux definitely one of the fastest-growing (IDC)

Its Risky

- Try Linux in targeted, non-critical, low-investment application space
  - Name server
  - File Server/Print Server
  - Webserver/ftp/firewall
- Try it in another, and another
- Use Free Software in new projects

Its *Still* Risky

Then stick with your (name a defunct operating system, computer company or hardware platform.....say Intel 286)

When You Have the Source, You Have *Protection*

- Protection from forced product upgrades
- Protection from companies going out of business
- Protection from non-responsive business partners

How can this be more risky than a black box?

Financials

- Typical Example:
  - W98 system - $199. for workstation OS, but $2K to make it useful (compilers, programs)
  - WNT system - $600. for server package, but $4K to get it ``useful''
- Commercial UNIX - $500-1200 for workstation runtime, $3000-$$$ for server software
- Can you even GET the source?

Linux

- The least expensive Linux solution I have seen was under $50. (Raspberry Pi).
  - e-mail, editors, applications
  - Web Server, browser
  - Compilers, debuggers
  - ``Internet Ready"
- How many workstations, POS terminals, Kiosks, webservers, firewalls are you going to need?

Summary

- You should try Linux in your environment
  - It may not fit every need
  - It may fit a lot of needs
- Work with VAR to tailor system *exactly* to your needs.
- Compare how much the alternative answer would cost
- Write up your application/answer and publish it in a magazine

Questions?

Go with the source, Luke!