

# Linux Geek Appeal for Non-Geeks: “What is it about that penguin?”

## SHARE Session 9219/5506

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# The Linux Phenomenon (A Geek's Viewpoint, with stereotypes!)



- Geeks like to work with small, sharp tools
- Geeks like to get things for free (so does everyone)
- Geeks like to control their environment
- Geeks are lazy
- Geeks are hyperspastic and temperamental
- Geeks are attention-deficient
- UNIX is full of small, sharp tools, and Linux is UNIX
- UNIX is expensive, but Linux is free
- Linux lets you control *everything*
- Linux lets you automate the boring part of your job
- Linux lets you fix *your* mistakes, not the system's
- Linux is *fun*

# More About Those Small, Sharp Tools

- “Small” means each tool does one thing
  - Modularity (build complex things from simple blocks)
  - Learn the system in small increments, over time
  - Documentation on any one piece is a manageable reading assignment
- “Sharp” means it does that one thing *very well*
  - Focused coding efforts → reliability, speed
  - Elegant design, meant to be appreciated as such
  - Open Source coders sign their work with pride

# A Geek's Eye View of Windows

- Dumbed down (read: “confining”)
- Bloated (read: “slow”)
- Expensive (read: “expensive”)
- Incomprehensible (read: “proprietary”)
- Unreliable and insecure

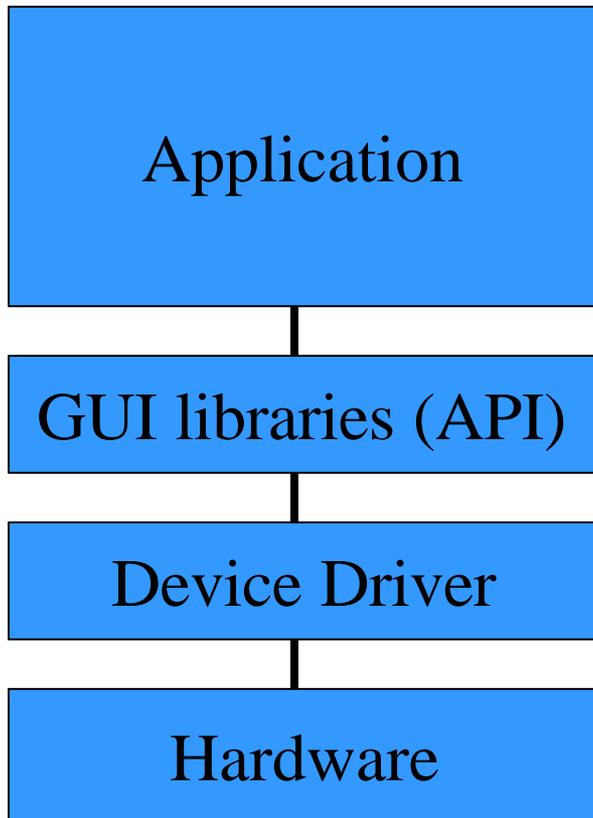
*But this talk isn't about why Windows is bad...  
It's about why Linux is GOOD!*

# Open Source Software: Free Speech, Free Beer!



- Free Speech
  - If it's broken, you can fix it
  - You can pick it apart to see how to make it work
  - You can trust what's inside
  - Choose the tools you prefer (open standards!)
  - No one can take away your right to use the code
- Free Beer
  - Try it for free, keep it if you like it
  - No stupid license paperwork for Suits
  - Every admin and developer gets their own copy

## Traditional graphical user interface (GUI)



Application calls GUI API

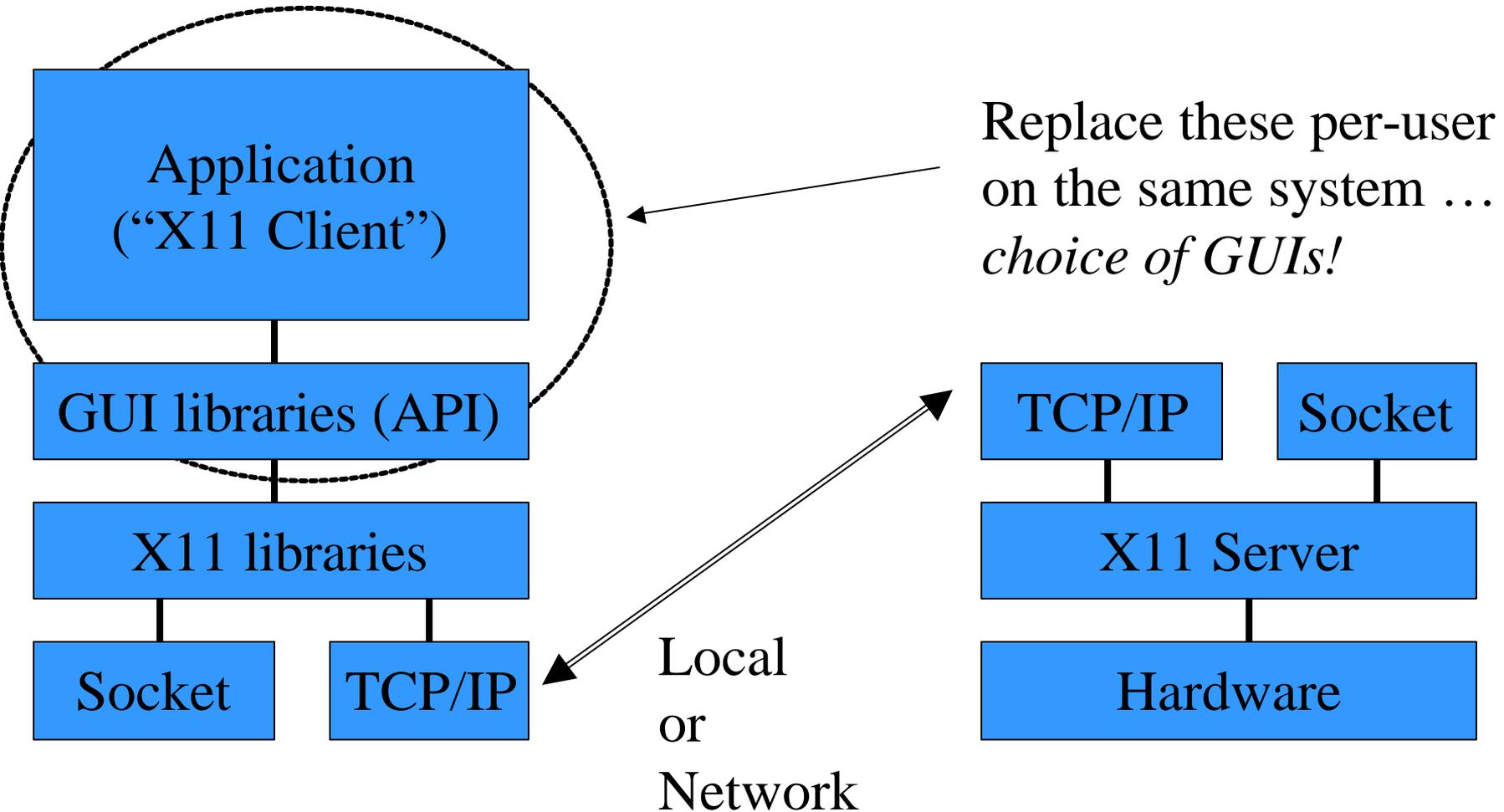
GUI API calls device driver

Device driver controls hardware

- Must be local (or use add-on)
- Fast, but inflexible
- Invites hardware-dependency

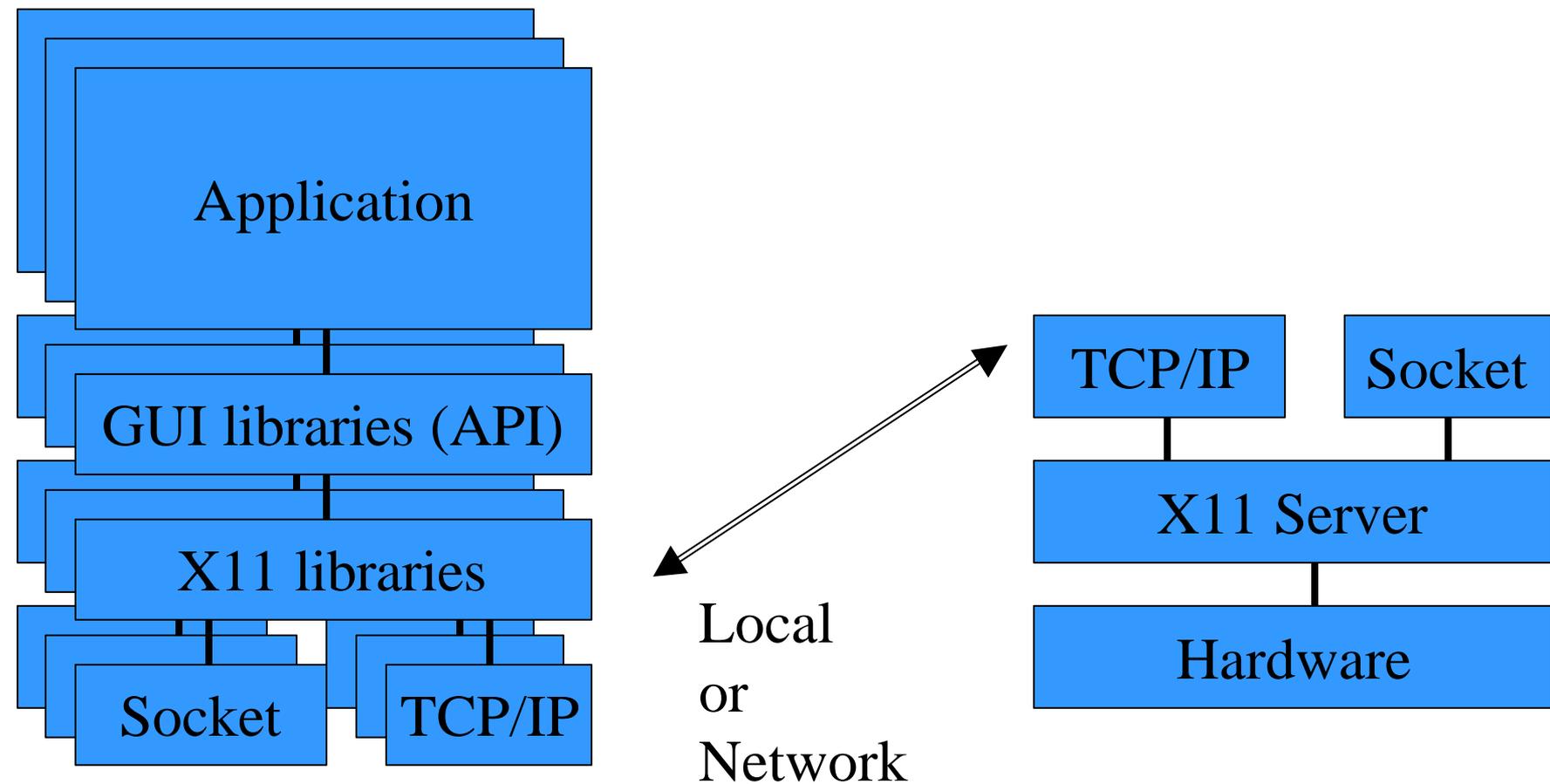
# The X-factor (continued)

## Graphical user interface (GUI) with X11



# The X-factor (continued)

One display/keyboard, *many* remote systems



# The X-factor: WHY?



- First, some drawbacks:
  - Older X11 apps not as “polished” for end users
  - Performance (running games on your web server?!)
- Remote administration:  
Save steps, save time, share gurus across distances
- Remote user support
  - See the error in a GUI app, as *they* see it
  - Help the user with complex tasks
- Cross-platform Linux, UNIX, VAX, even Windows

- Ease of use: *Make it simple for a beginner*
- Efficiency of use: *Make it fast for an expert*
- User interfaces are not one-size-fits all.
- Don't give a power saw to a child...  
...Don't give blunt-nose scissors to a grown-up!

# Shell Games (continued)



- Automate repetitive tasks easily
  - Managing large directory trees
  - Managing many servers
  - Same change to many user accounts
  - Things that go “done!” in the night

Conceptual bandwidth:

Communication speed between human and machine

- Sometimes concepts are not easily expressed in pictures
- No ambiguity – precise control when acting on many files or users
- Documentable and communicable – concisely

# Conceptual Bandwidth: An Example

- The Graphical “Easy” Way to Clean Up Filespace...  
*Open up the file management window. Scroll down until you find the directory where all the users’ personal folders are found. Inside each one, there is a subfolder called “temp.” Click on that folder. Now use the mouse to select everything inside that folder and delete it, but don’t delete the folder itself.*
- The Command-Line “Hard” Way (one of several)...

```
for dir in /home/*; do  
rm -rf ${dir}/temp/* 2> /dev/null  
done
```
- Nobody says the second way is intuitive, but to a system admin it’s a whole lot more productive!
- Look which one is more concise, and less ambiguous.
- Second way takes less bandwidth when working remotely, such as via modem.
- Command line can be saved as a reusable script. GUI...???

# A Moveable Feast

- “Geeks are lazy” – make me learn just *one* system
- Challenges are great – the *first* time I solve them
- Many computer types, one operating system
- Portable code, even in C/C++
- Widely-standardized libraries for system calls
  - POSIX
  - X11 and related
  - GNU libraries (glibc, etc.)



# Geek Appeal, Suit Style



## Suits say...

- I need interoperability, self-determination, and security.
- I need to cut license costs.
- I need to attract good technical talent.
- No business value in the o.s. as a standalone entity.
- I need to cut the cost of customized application development.

## Geeks say...

- Free speech.
- Free beer!
- Linux is cool, and I learned it in college.
- So, why are you paying so much for it?
- Use the Source, Luke!

*You're both saying the same things, in different ways!*

# Cost Containment, Geek Style



## Geeks say...

- Don't make me use a lame system that crashes.
- Who wants to walk all the way to the server closet?
- Just give me good tools and get out of my way.
- Hard to learn?! It's UNIX. What's the problem?

## Suits say...

- Downtime means lost profits, lost productivity.
- Remote administration is cheaper than travel.
- System admins are expensive talent – use them wisely.
- One set of training, from plant floor to desktop to glass house.

*You're both saying the same things, in different ways!*

# Suits' Viewpoint (Alternative)

- The old attitude:
  - Geeks just want to play with the toys
  - Business and technology are separate criteria
  - “Cool” doesn’t mean “good business decision”
  - Geeks: Rebels looking for a cause
    - Mostly about hating Microsoft
    - Resist IT standards as a way of flaunting authority

# Suits' Viewpoint (Alternative)

- The new attitude
  - Geeks like Linux for a *reason*
  - Geeks, as skilled craftsmen and craftswomen, want to work with quality tools
  - Efficient geeks mean efficient system administration
  - A happy geek is a motivated and productive geek
  - Open standards and portability are your friends
  - Downtime and crashes are not profitable



# Conclusion: We're Not So Different!

- Geeks want systems that run efficiently, cheaply and reliably, because it's more fun.
- Suits want systems that run efficiently, cheaply, and reliably, because it's more profitable.

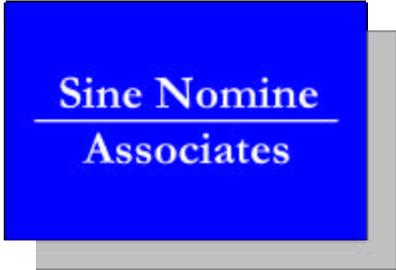
***Congratulations! This “Linux”  
could be the start of a beautiful  
relationship!***



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