# Sovereignty

By
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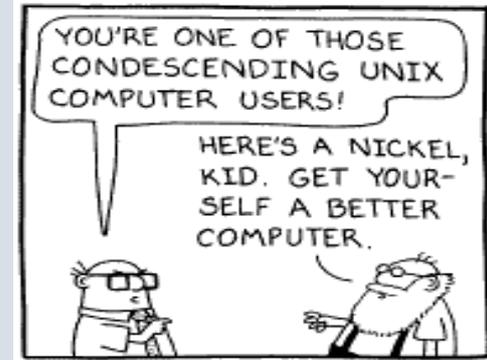# Old Fart's BoF

## 1900-2000 Room 209

March, 2026 © Linux International

# Who Is maddog?

- *Half* Electrical Engineer, *Half* Business, *Half* Computer Science

- "Open Source" since *1969*

  - Mainframes 5 years

  - Unix since 1980

  - Linux since 1994

  - Latin America since 1994

- Companies (mostly large): Aetna Life and Casualty, Bell Labs, Digital Equipment Corporation, SGI, IBM, Linaro, Caninos Loucos.

- Programmer, Systems Administrator, *Systems Engineer*, Product Manager, Technical Marketing Manager, University Educator, Author, *Businessperson*, Consultant, Board Chair Emeritus

- Taught OS design and compiler design

- *Extremely* large systems to *extremely* small ones

- Vendor *and* a customer

- *Pragmatic*

YOU'RE ONE OF THOSE CONDESCENDING UNIX COMPUTER USERS!

HERE'S A NICKEL, KID. GET YOURSELF A BETTER COMPUTER.

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# Who *is* maddog?

- "Open Source" since 1969

- RMS since 1986

- Linux since 1994

- Caninos Loucos since 2012

- Bernie Boy since 2015

  *One hundred countries, most more than one time*

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# Kings and Serfs

- A King is a Sovereign

  - They tell the Serfs what to do

    - When to farm (the King's) land

    - When to get married (later transferred to Church)

    - They make and execute (!) the laws

- The Serfs own nothing

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# Masters and Slaves

- Masters owned everything, and told slaves
  - What do do
  - Who to marry
  - What to eat
  - Where to live

- Slaves owned nothing
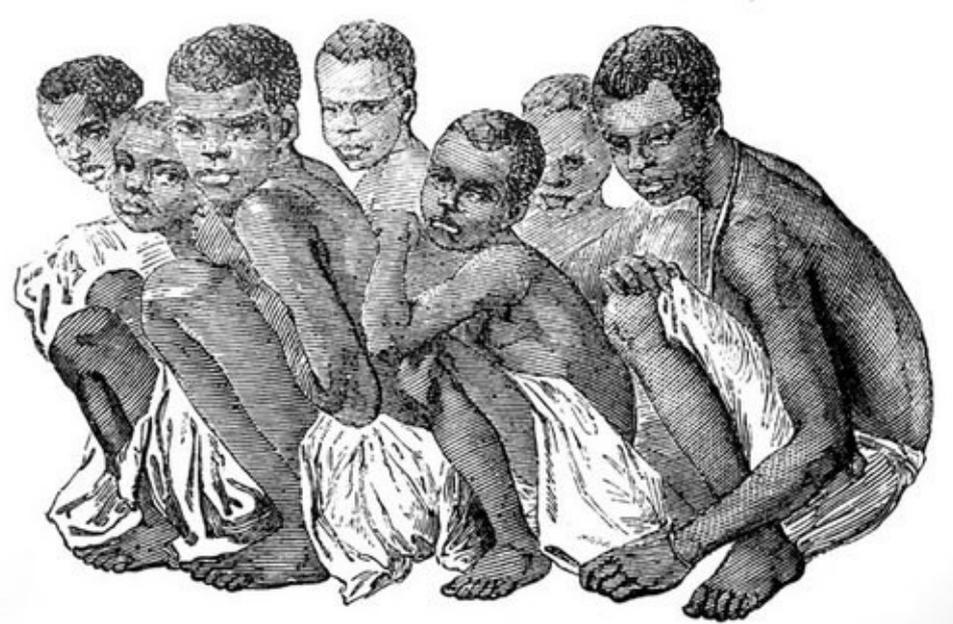
# Closed Source Companies

- "Masters"
  - Tell you where to put their software
  - When to upgrade their software
  - How many people can use their software
  - When to retire their software

- Closed source users are software slaves

# Open Source Is No Better

- Open Source is good for developers
  - Large amount of software freely usable
    - Efficient
    - Tested (more or less)
    - Developers know how to use it

- End Users still can not change binaries
  - Many detriments of closed source still apply

# Free*dom* Software Is The Path

- Free Software allows end users to:
  - Put software on architecture they want
  - Upgrade software when they want
  - For as many users as they want
- Even if they do not have the expertise….
  - It becomes a business decision

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# Business People Hate Free*dom*

- There is nothing about Freedom that business people like
  - With freedom comes choice
  - With freedom comes competition

- What business people like is **control**
  - ***Stop talking about freedom!***
  - ***Talk about control!!***

# Sovereignty

- I *love* Donald Trump (yeah, right)
  - Trump has shown you can not trust the United States
  - Trump has shown the countries of the world that the US is not "stable"
  - Trump has allowed the oligarchs to take control

- The rest of the world now needs "sovereignty"
  - US citizens need "sovereignty"

# Not "Just" Sovereignty of Data

- Sovereignty of software

- Sovereignty of networking

- Sovereignty of technology

  – Design

  – Manufacturing supply chain

**_Users need control_**

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# One More Consideration: Quantum Computing

- Need to (re) encrypt data to be quantum resistant

- Need to change VPNs to QPNs

- Need to move toward MFA

- Need to retrain billions of people

# Plenty of Time...*not!*

- Quantum computing is ~~ten~~...~~five~~.....~~two~~...years away
  - So was Y2K
  - It may already be too late
    - Harvest the data today, decrypt tomorrow
    - Encrypted backups are almost as good as today's data

# Encrypted VPNs

Will be decrypted during the session

# What Cloud Do You Use

- Under whose laws?

- Under whose ownership?

- What is their supply chain?

  – Operating system

  – Chips

# What Chip set Do They Use?

- What company makes it?
    - Can you test the chip?

- Where is the FAB?

- Where is the PCB manufactured?

- Is the boot code trusted?

# Today We Have...

- Freedom Software

- RISC-V Architecture

# Need Sovereign Clouds

- Clouds where you need them
  - Security first
  - Location where you want them
  - Software under your control
  - Authentication that is Open and Secure

# Enterprise Sovereignty

- Qsentinel AG

  - Hardened Data Center in Switzerland

  - NIST approved Quantum encryption and QPN

  - Open Source applied

    - Migration services available

  - End-to-end security

  - Sovereign AI

- Licensable to your own data-center

# Community Cloud

- Freedombox.org
  - Secure server
  - Blob-less Debian based
  - Eas(ier) to use
  - Runs on SBCs
  - Backup to a friend (or your mother)

- Supports Fediverse.party software

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# Multi-Factor Authentication (MFA)

- Login name and ~~password~~phrase

- Fingerprint

- Facial Recognition

- Time/Day oriented

- Geographical oriented

- Least privilege access

- Hardware key

# Hardware Key

- Need two
  - One to use day to day
  - One to give to your mother who lives 100 Km away

- Uses a standard like FIDO 2

- Should be Open Design
  - Inspectable
  - Long life

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# Solokeys.com

- Open Software, Firmware and design on Github

    - Secure key, fixed by manufacturer

    - Hacker versions also available at same price

- FIDO 2 compliant

    - Operating system login

    - Customized through SELINUX, Apparmor and PAM

    - Many applications can use it

        - Useful from accessible client systems like library computers

# Questions?