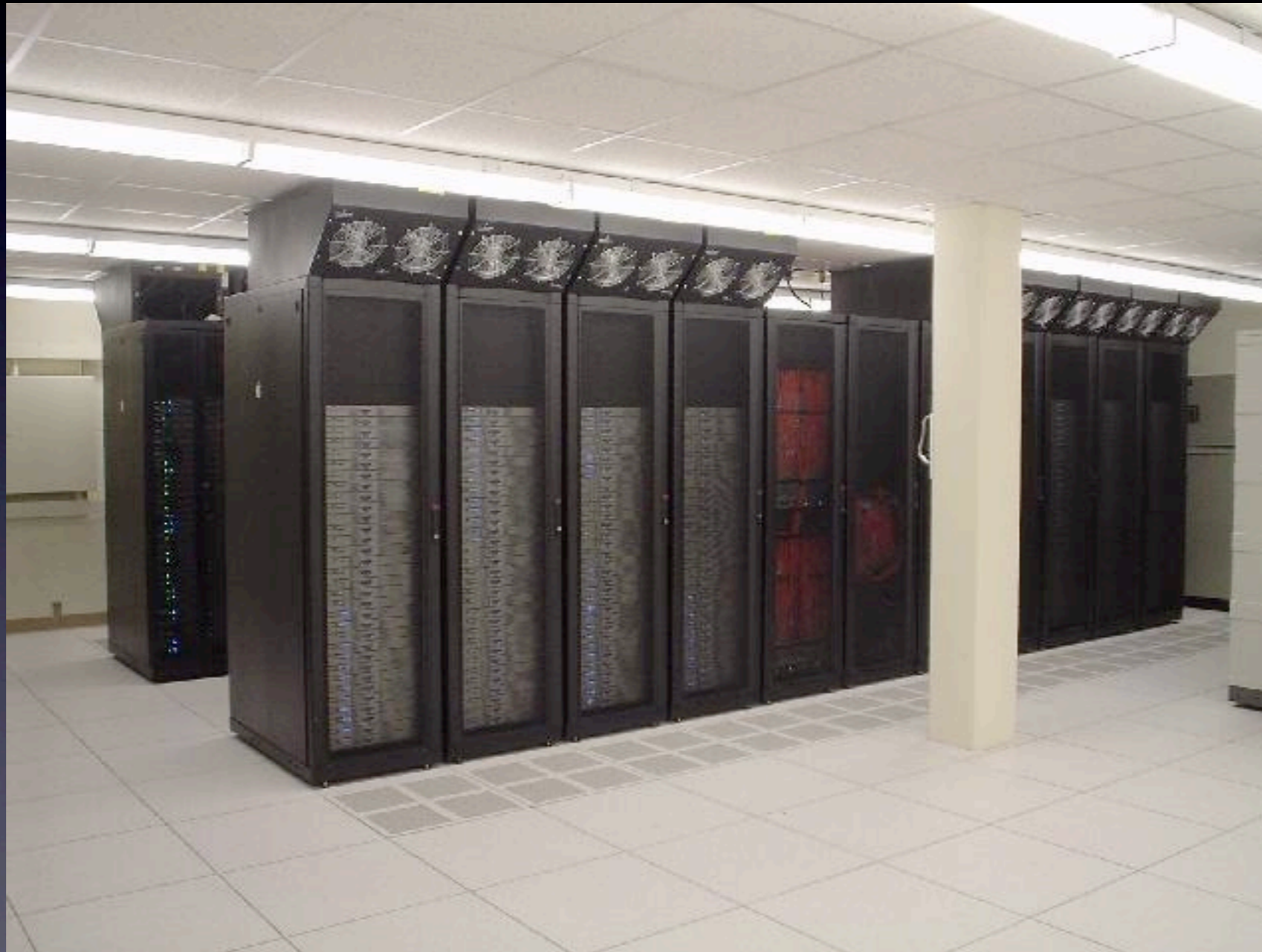


# Home Automation

Charles Edge  
Director of Technology, 318

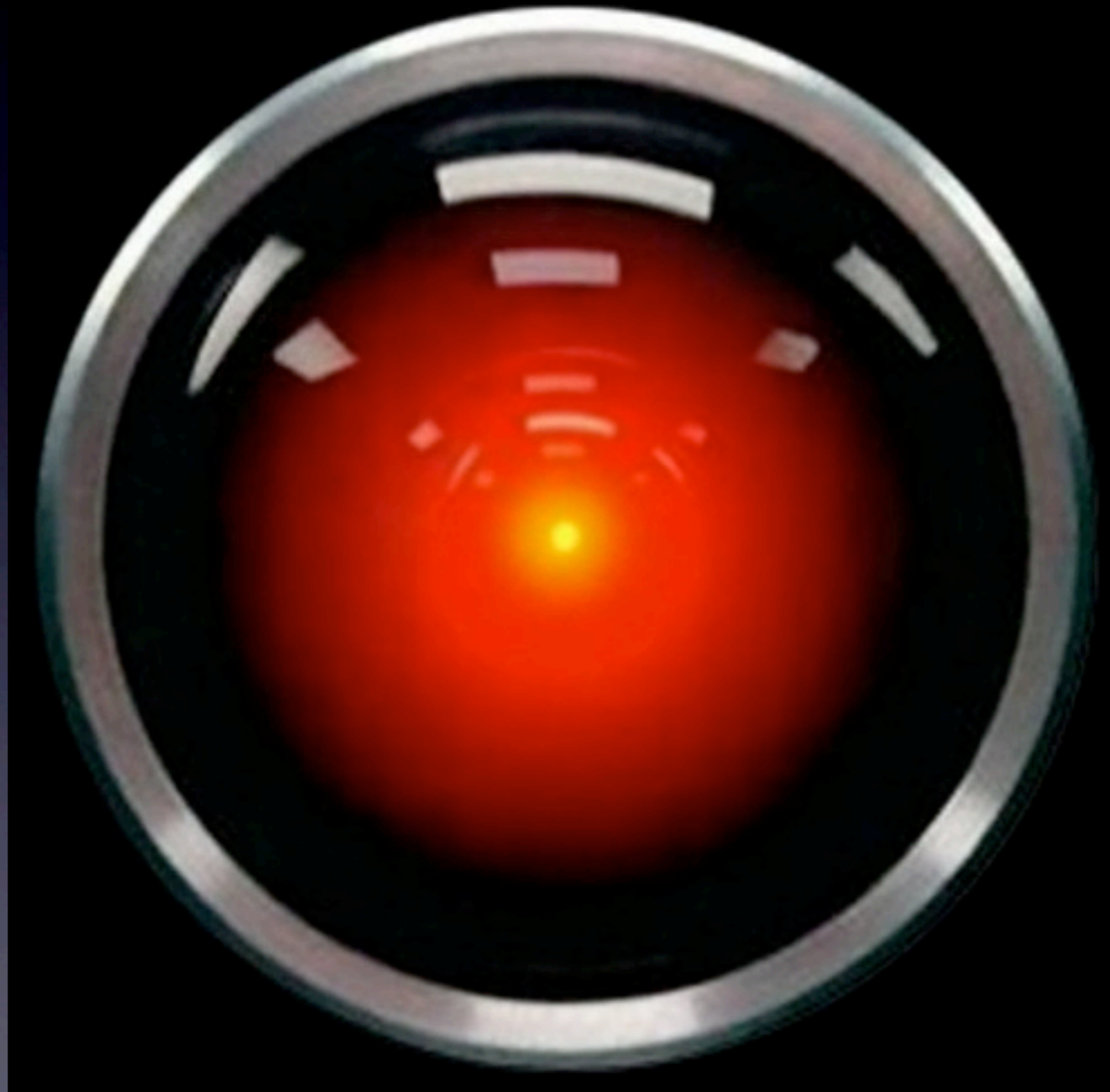
# whoami: Server Guy



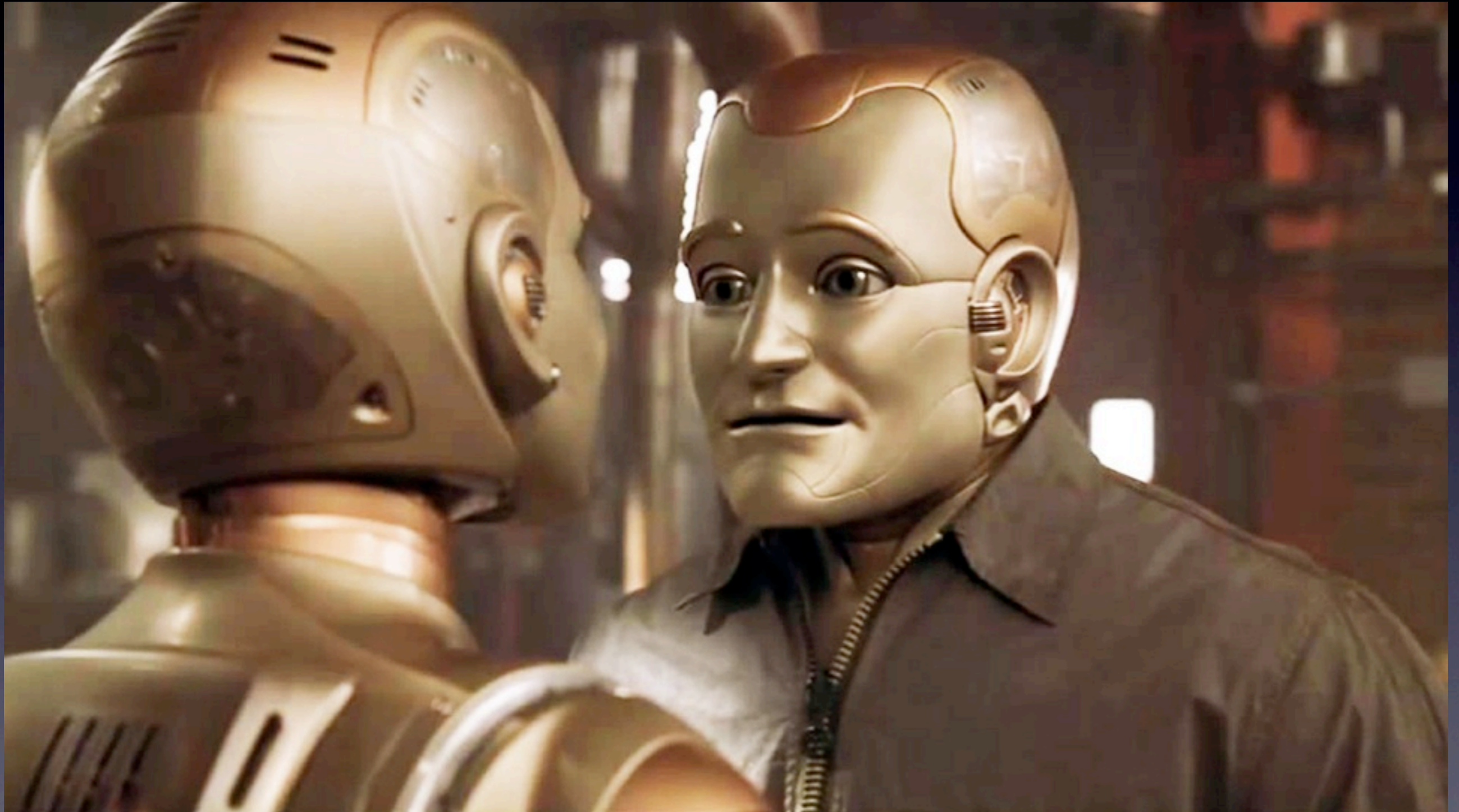
# Home Automation



# My Dream



# Positronic Brain



# Some Flair

# Some Flair



# But Not The Bad Kind





# Why?



# What I Didn't Want



# Unrealistic?





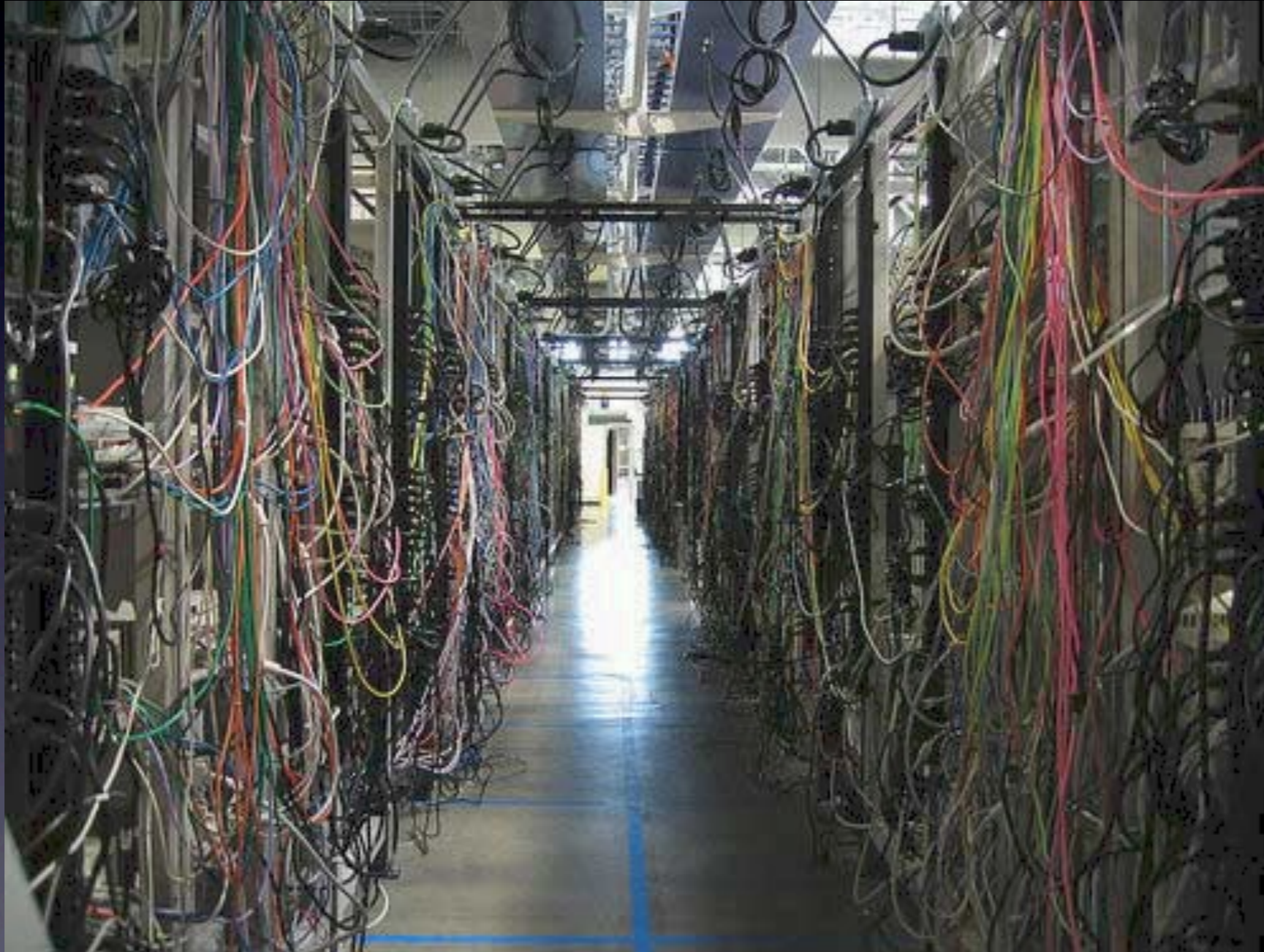
# If Rick Moranis Can...



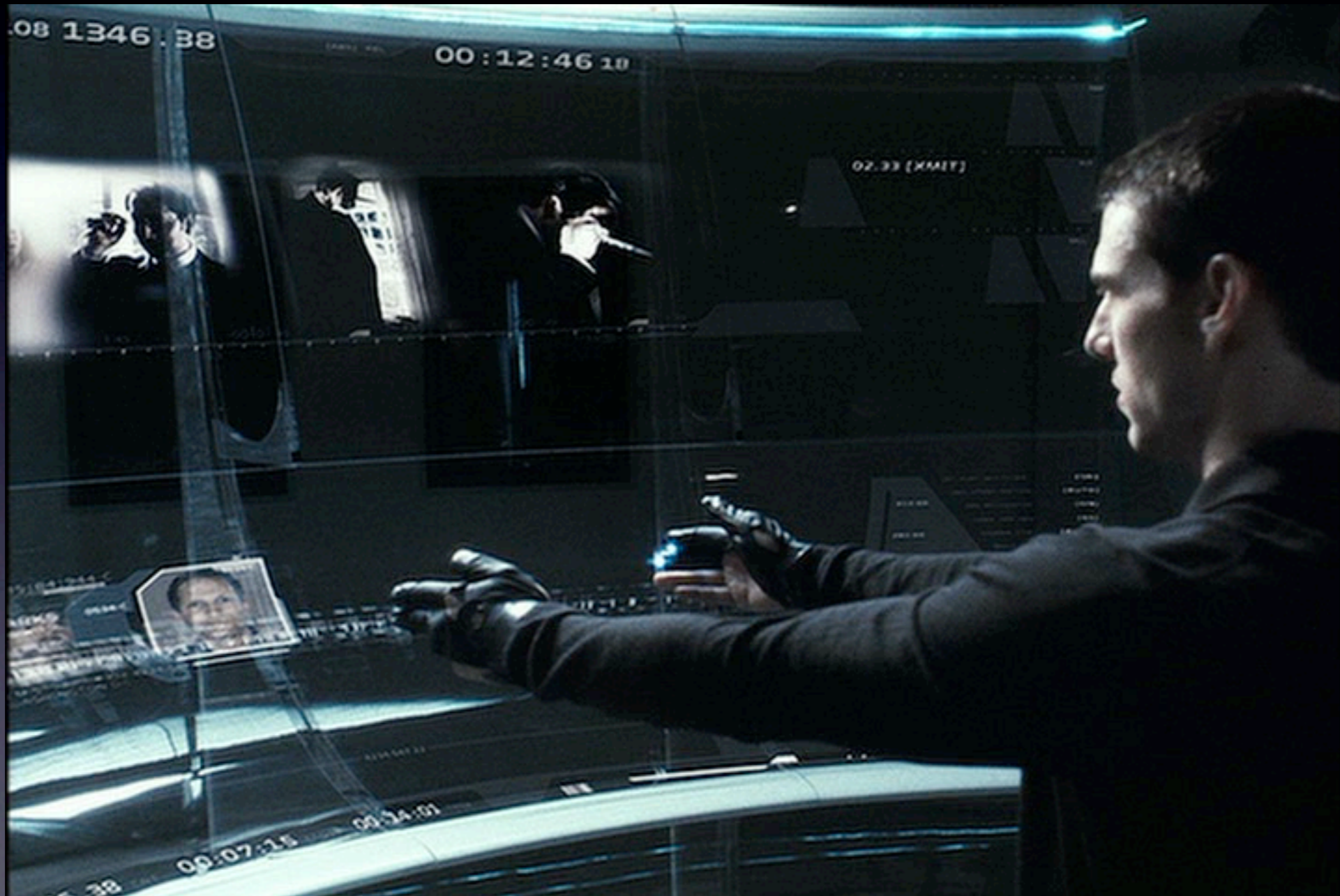
# If Rick Moranis Can...



# All Wirelessly



# Multiple Interfaces...





# Movies Lie?!?!



# But You Can Do Some Awesome Stuff!

- Automatic Locks
- Motion Sensors
- Climate Control
- Time-based automations
- Control things over the Internet

But Why?

# Good For the Environment



# Cool



# Saves Time



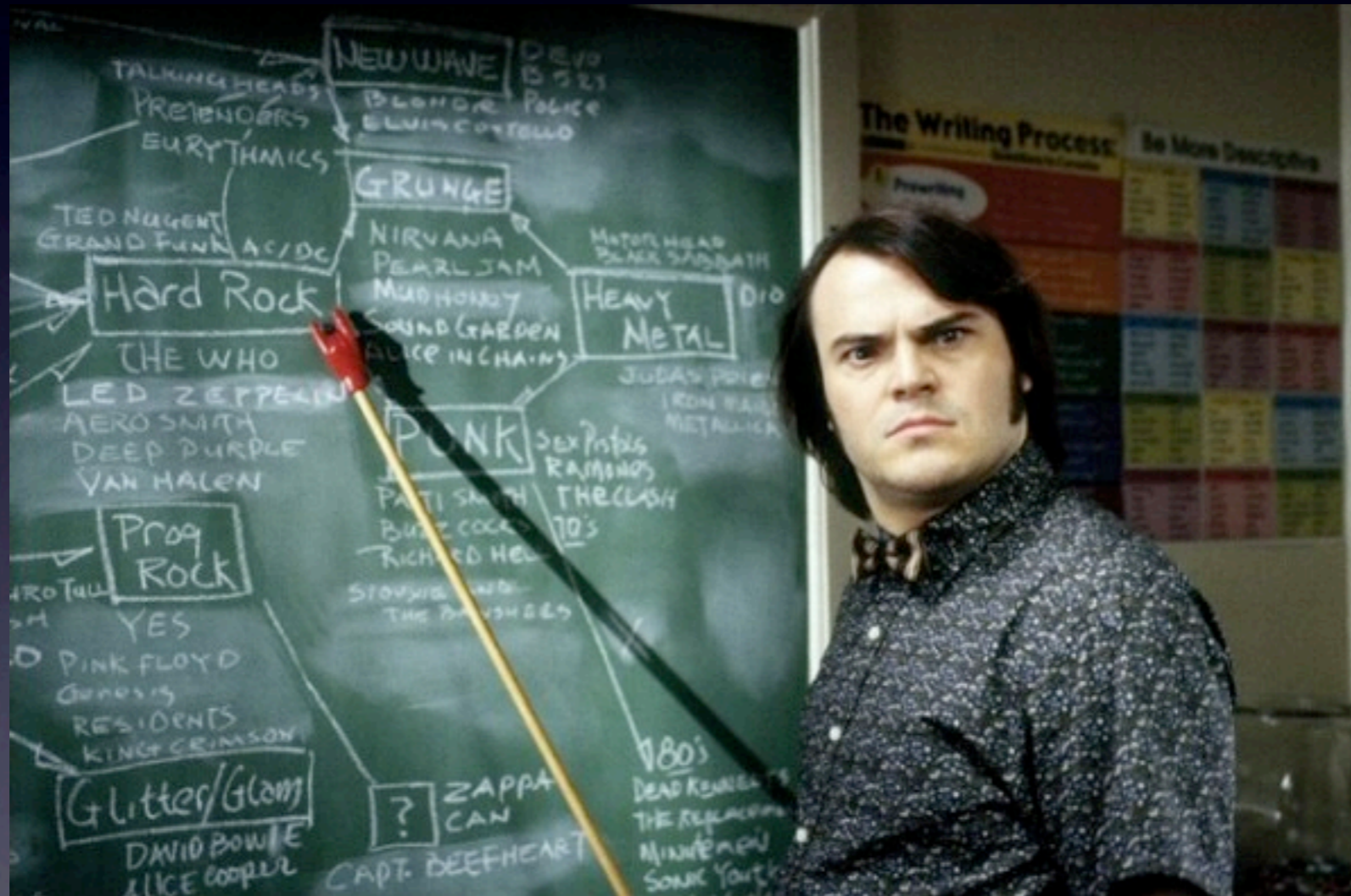
# Saves Money



# Getting Started



# Lessons Learned



# Lessons Learned

- Define Scenes
- Pick a protocol
- Pick a vendor
- Buy as much at once
- Management
- Patience

# Define Scenes



# Protocols

- Z-wave
- Zigbee
- X10

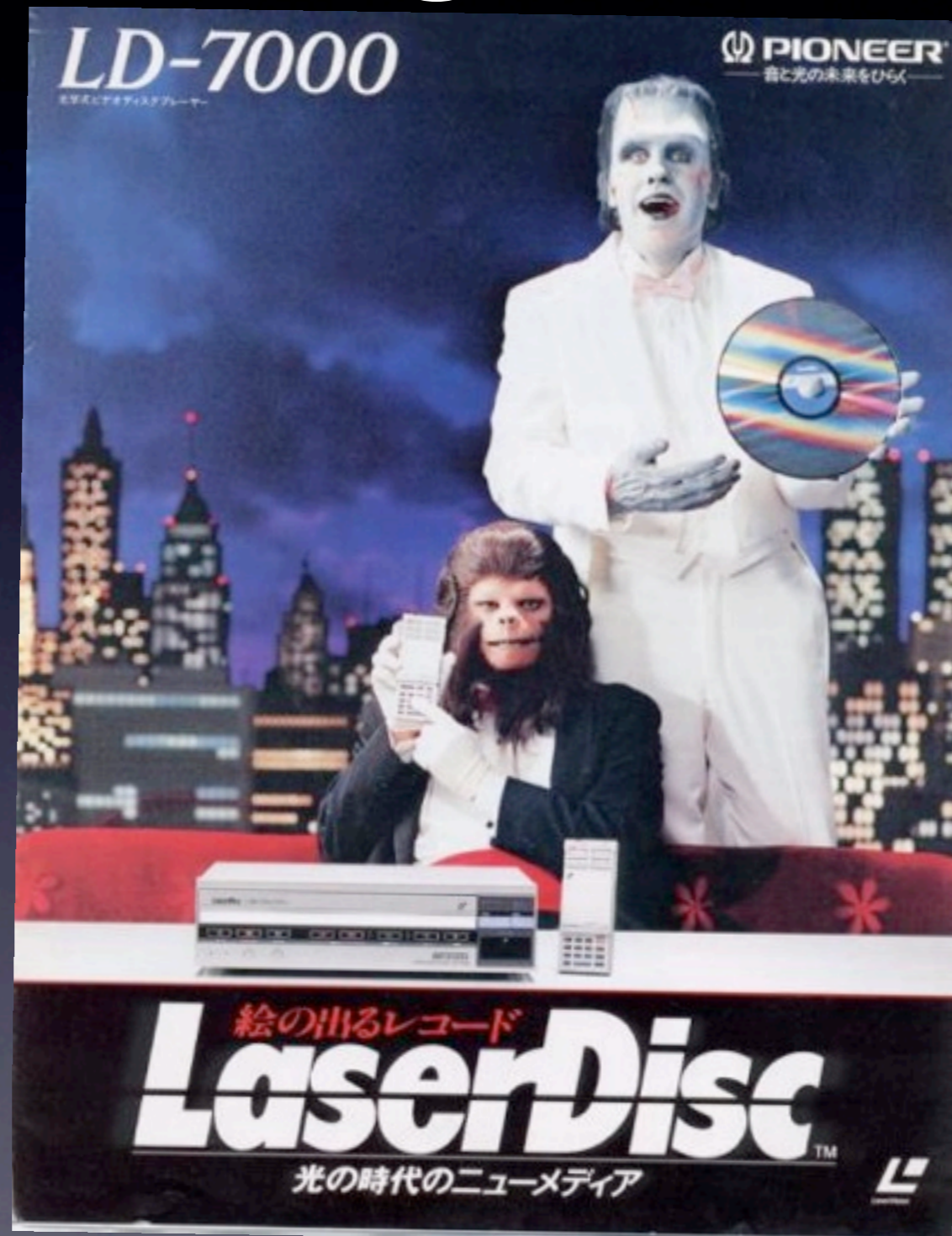


DEFRAG BY NEBU

# Zigbee

## Good Idea

# Zigbee



X10

# SPAM<sup>®</sup>

Ingredients:  
Pork with  
Ham, Salt,  
Water,  
Sugar,  
Sodium  
Nitrite.



GET  
**SPAM**  
STUFF  
SEE BACK FOR DETAILS

NET WT.  
12 OZ.  
(340g)

U.S.  
INSPECTED  
AND PASSED BY  
DEPARTMENT OF  
AGRICULTURE

**Hormel**  
Foods

Serving  
Sugges

# Z-Wave





# Cheap Z-Wave Stuff



# Bridging Protocols

- Crestron to Z-Wave
- X10 to Z-Wave
- Using Adapters on Existing Outlets (ie - lamp modules)

# Pick a Vendor

- Crestron
- Wayne Dalton
- GE
- HomeSettings
- Etc.

***iRobot***

# Pick a Vendor

savant  
NOW YOU CAN

CRESTRON

INTERMATIC  
Home  
Settings

Wayne  
Dalton

Wayne Dalton  
ZWave Commander

- GE

- Zwave

gs

SCHLAGE

iRobot

Control

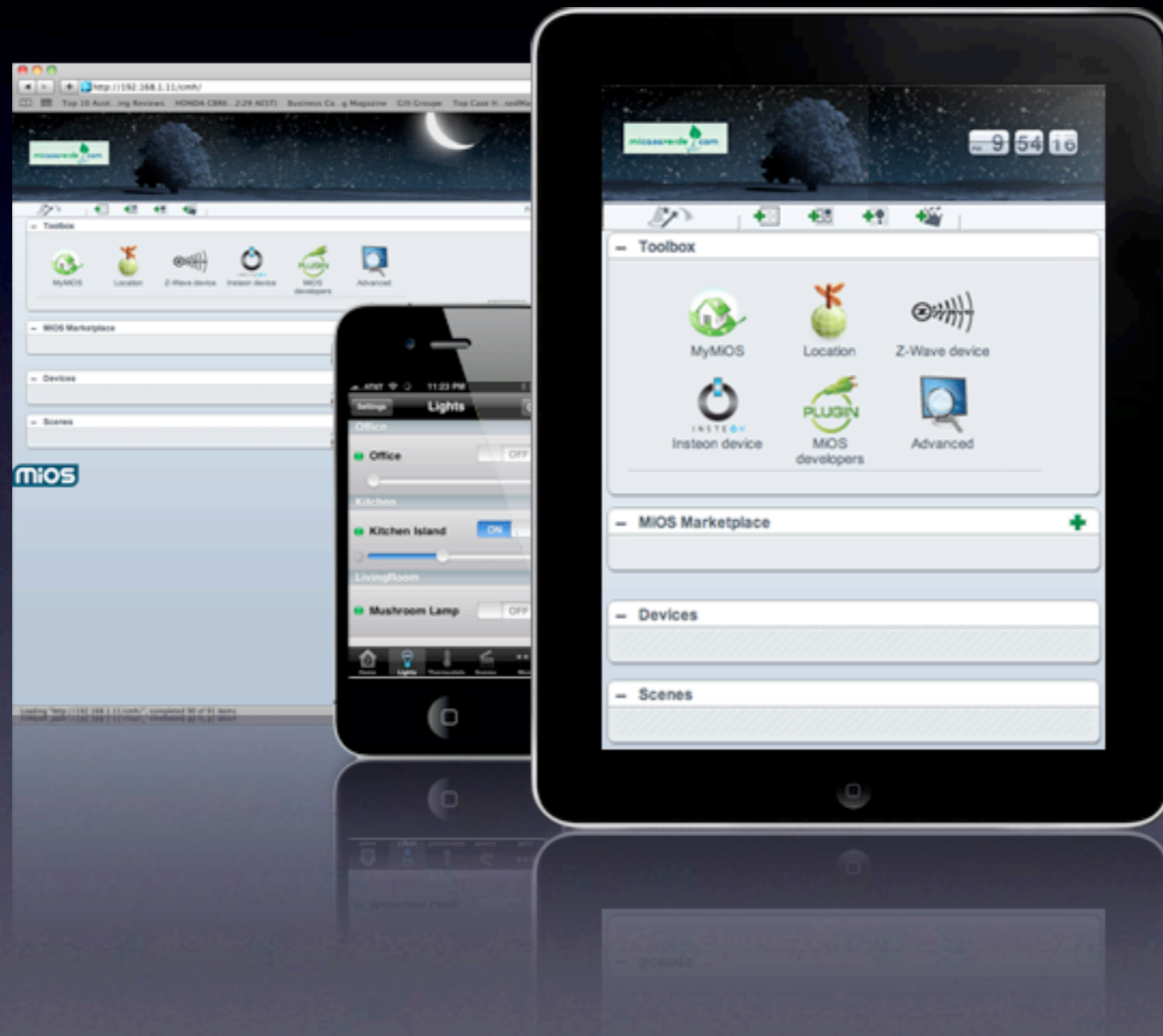
micasaverde.com



# Buy It At Once

- Still an immature business
- Controllers don't always support newer equipment
- Older modules can be hard to find
- Lots of luck on eBay

# Management



# Management

# Management





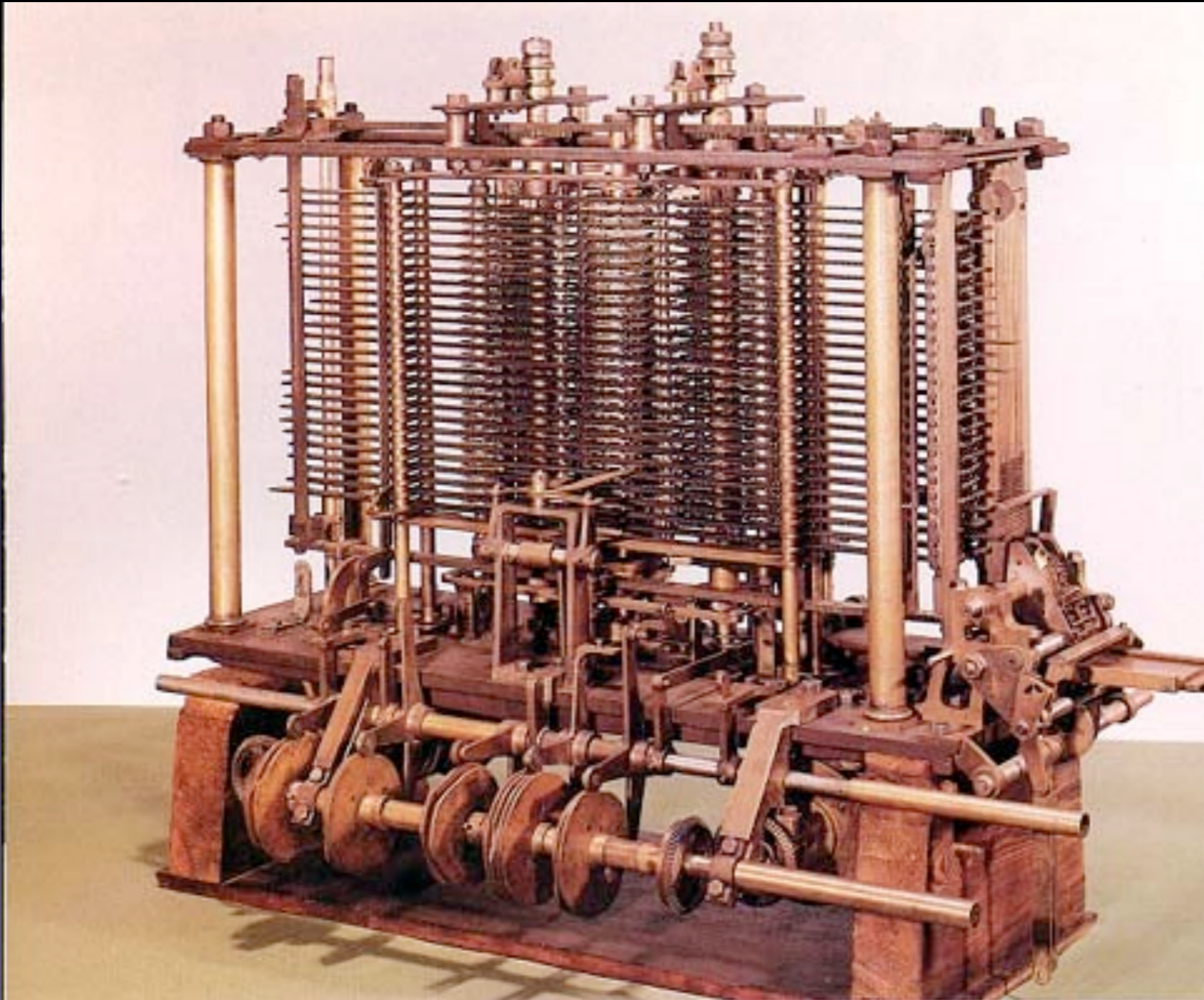
# Verify Compatibility



# Patience



# Hardware



# Dimmers

- GE, Wayne Dalton, Intermatic
- Schlage
- Make sure to get the right kind!
- Problematic with CFL
- \$40 and up



# Garage Door Openers

- Transmitter - \$40
- Garage Door Converter - \$30
- Or an Opener for \$200



# Door Locks

- Schlage and Kwikset
- Z-Wave, but LiNK required
- Key and keypad override
- Get an email when the kids get home
- \$190-\$250 each



# Power Outlets

- Usually around \$30-\$50 each
- GE, Intermatic
- Usually one controlled port



# Power Strips

- Home Manageables - was \$50
- BuLogics - ?
- :(





# Appliance Modules

- Leviton
- Wayne Dalton
- Intermatic
- GE through RadioShack as low as \$15 each



# Motion Sensors

- Hawking
- Wayne Dalton
- Schlage
- Intermatic
- Schlage
- \$50-\$80 each



# Other Sensors



- Aeon - Door and Window
- HomeSeer - Motion/Temperature
- FortrezZ Water Sensor/Shut-off
- Everspring Smoke Sensor (door, etc)



# Thermostats

- Trane (Schlage)
- Wayne Dalton
- InTouch
- SilverPac
- Ecobee
- \$80 and up

# Thermostats

- Trane (Schlage)
- Wayne Dalton
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- SilverPac
- Ecobee
- \$80 and up



# Sirens and Alarms

- FortrezZ - ~\$50
- Everspring - ?



# Remote Controls

- Controllers as remotes
- Specific to vendors
- Separate from desktop
- Universals aren't so uni
- \$25 to \$8,000
- iOS = Subscription



# Cameras

- Schlage
- Micasa Verde
- Hawking
- \$130 to \$3,500





# Open Your Blinds

- DBMZ - ~\$135
- RS Scene - ? (Dealer Only)
- Techniku - ? (Dealer Only)
- Likely need help



# Controllers/Services

- Schlage LiNK
- micasaverde.com
- Wayne Dalton
- Hawking
- Aeon



Extra equipment needed.

# ZigBee and X10

- Control4 - ZigBee
- MiOS - Z-Wave, X10  
& ZigBee

# Scripting



- Tricklestar pyzwave
  - <http://www.beekerstudios.com/sites/default/files/TrickleStar%20Miniserver%20API%20Docs%20v250.pdf>
- Aeon

Not Z-Wave But  
Worth a Mention

# Cleaning Helpers

- iRobot Roomba
- Mop - iRobot Scooba
- Cut the Grass

# Cleaning Helpers

- i
- n
- c



# Car Starters

- Viper FreshStart (at Best Buy) - \$500
- X10 or Z-Wave -> Solenoid hacking - \$100ish





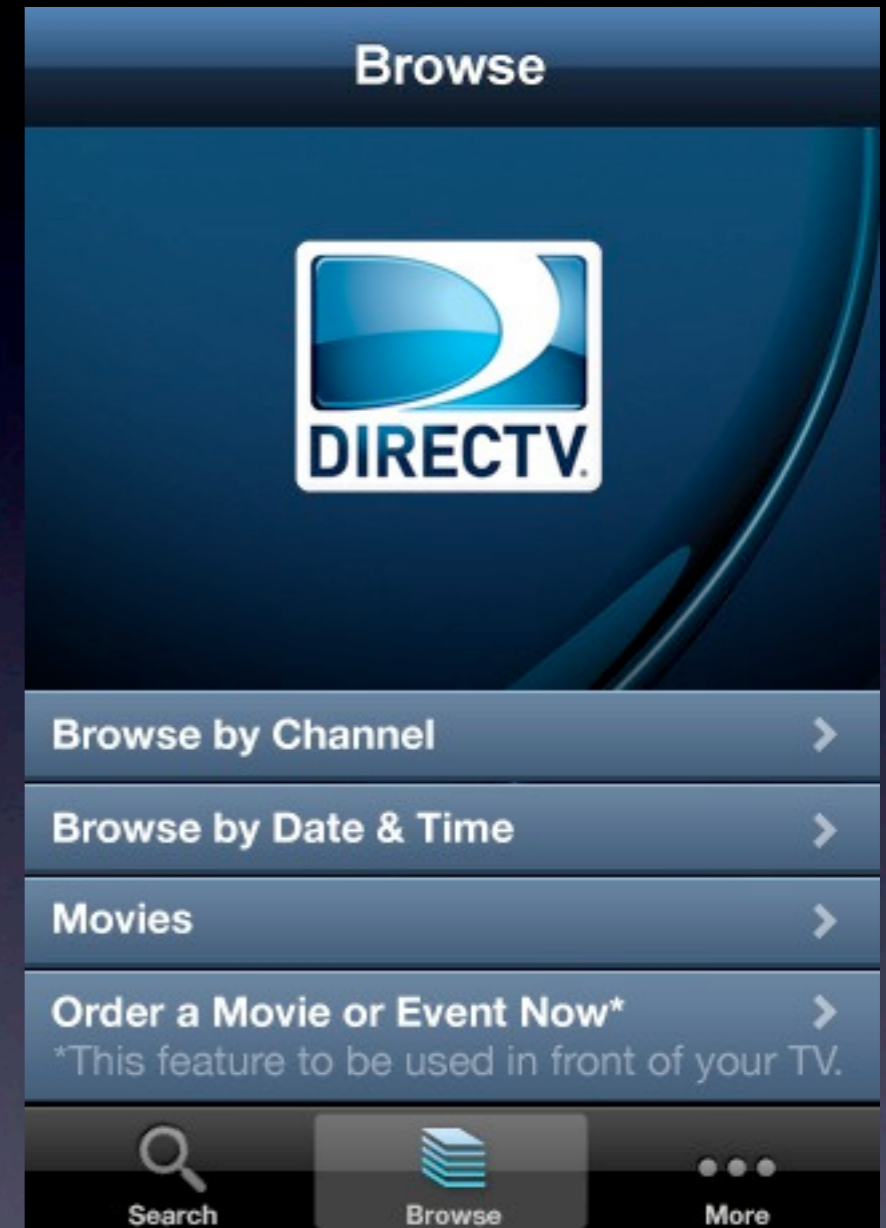
# Car Starters

- Viper  
Buy
- X10  
hack



# DVRs

- VCRs with Clocks
- Tivo
- DirecTV DVR Control
- Basically everyone



# Wish List

# Voice Automation

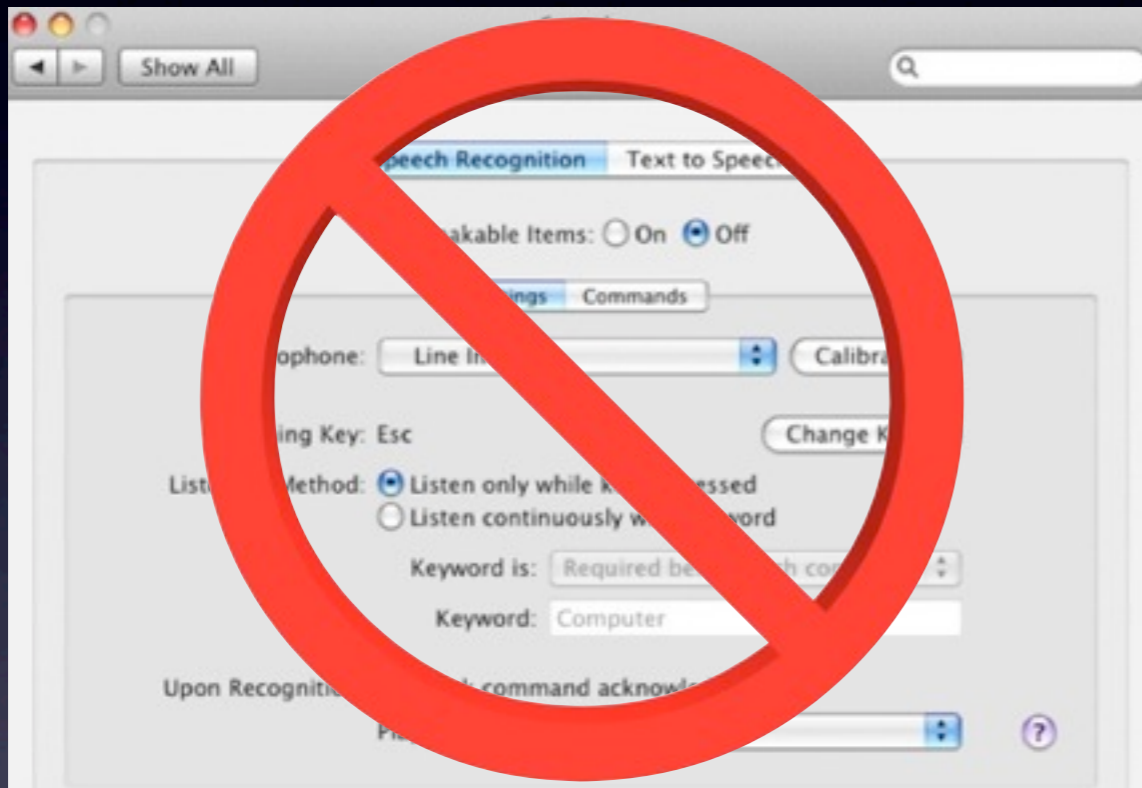
# Voice Automation



# Voice Automation



# Voice Automation



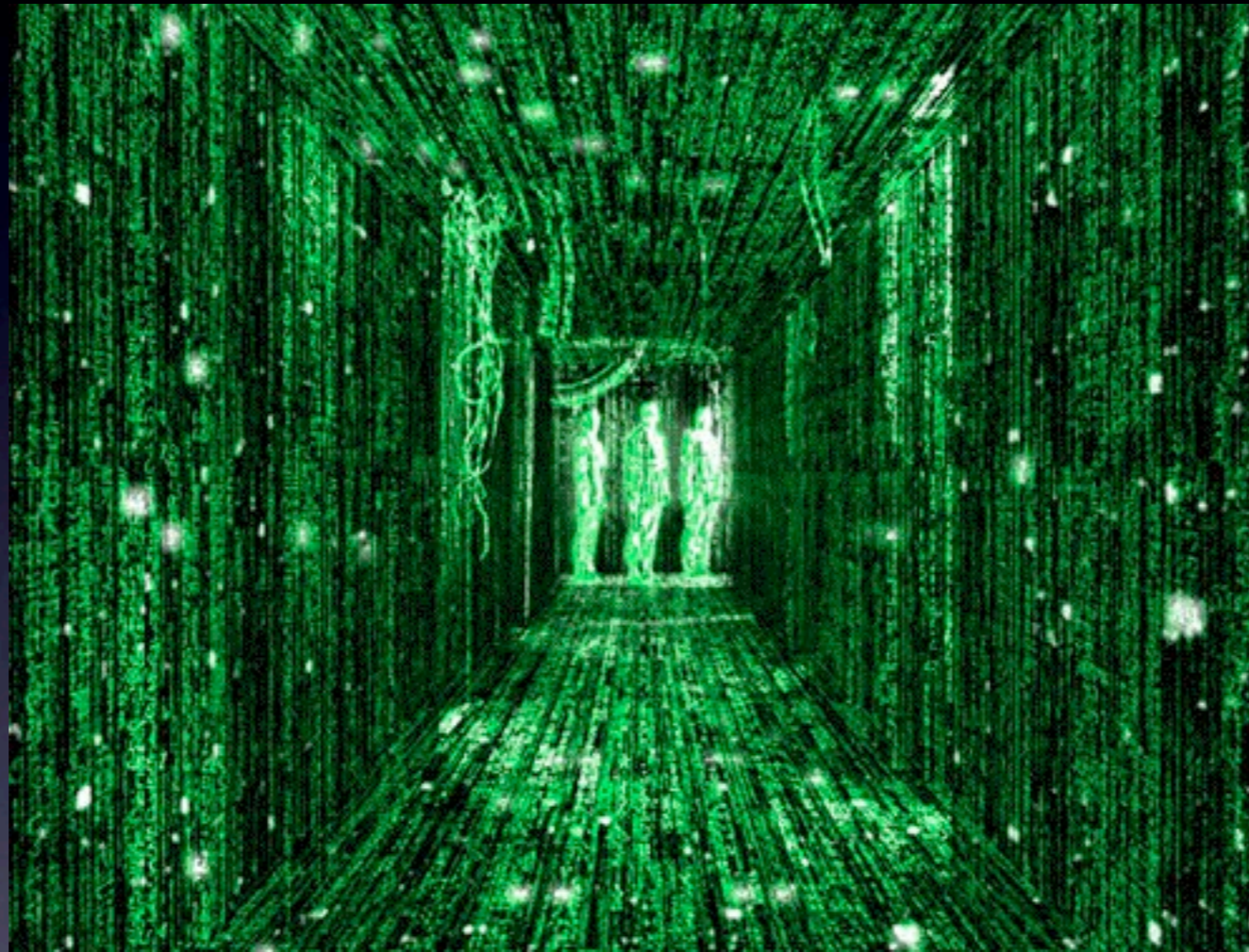
# Voice Automation





# Full Integration

# Full Integration



# Is It Too Soon?

- Home Depot, Circuit City & Radio Shack
- Wal-Mart, Best Buy and Target?
- But, before you can have any successful revolution...

# Demo