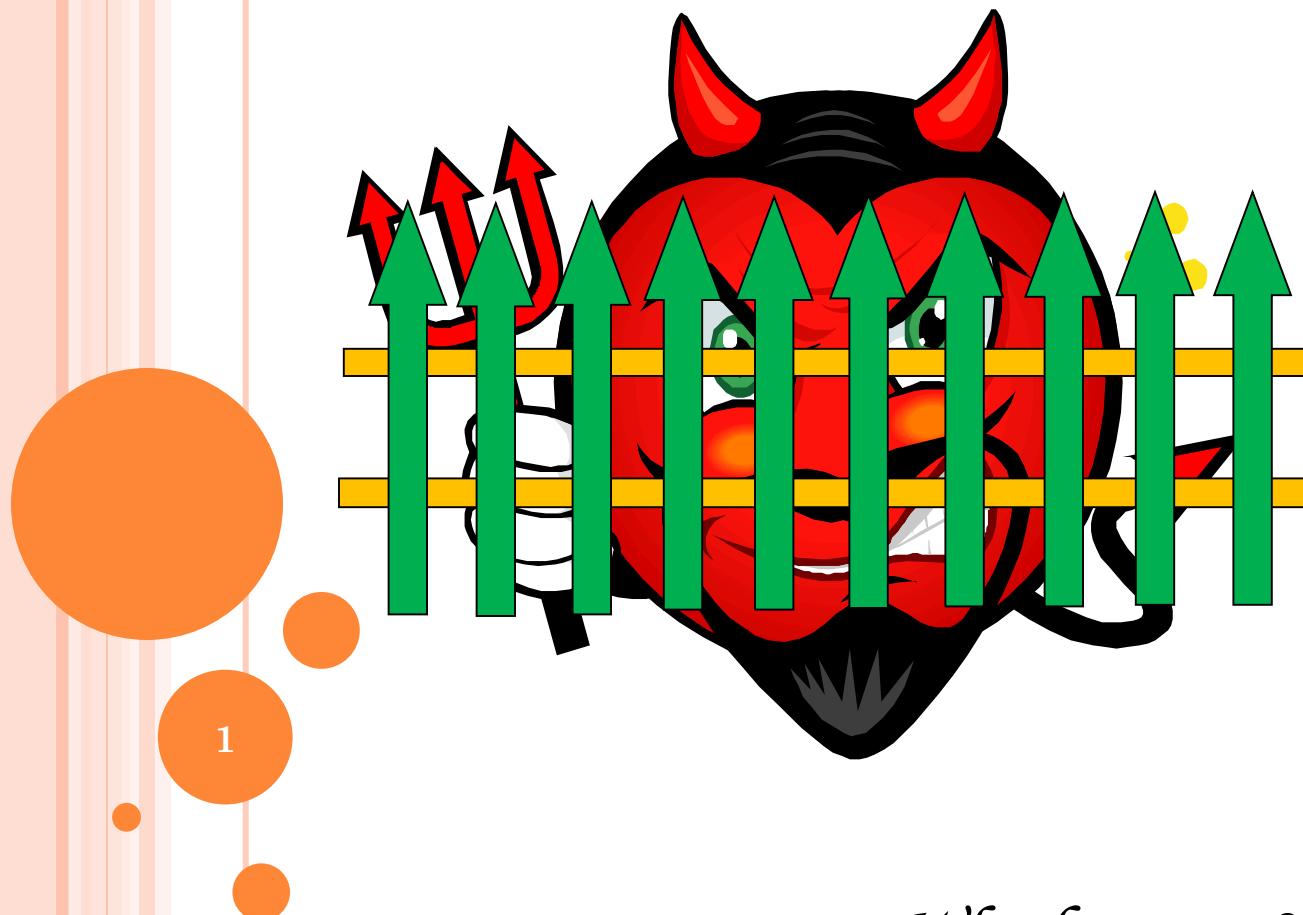


# Cyber Barrier CyB )



*Who foresaw 9/11... on 9/10?*

# CYBER BARRIER?

- Proprietary, real-time hardware+OS+software system.  
Modeled on **Secure** supercomputers to:



- **Secure Mission Essential Functions (MEF).**  
Software that directs missiles, switches power-grid  
transformers, makes stock trades...
- **Protects controller rich environments.**  
US power-grid, pipelines, nuclear reactors, POS  
terminals, computer controlled military hardware (all  
types)...

Confidential &  
Proprietary

# CYBER BARRIER?

- **Safeguard MEF.**  
In “impenetrable vault” while protecting from machine-coded malware.
- **CyB Interconnects its “vaults.”**  
In Secured Proprietary Web.
- **Field Proven underlying tech.**  
Designed, developed, and deployed for Texaco, Motorola, NWC China Lake, Lockheed, Pentagon, NSA...

# MACHINE CODE MALWARE – SCALPEL OF PROS



## Attacks with Machine Code Malware:

- Stuxnet
- Flame
- Duqu
- Mahdi
- Gauss

## New Next Gen Threats: Nuclear Malware

OSs have vast public documentation

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Proprietary

## The Problem

Software-only will  
never work

## The Solution

Hardened custom  
**hardware + OS**

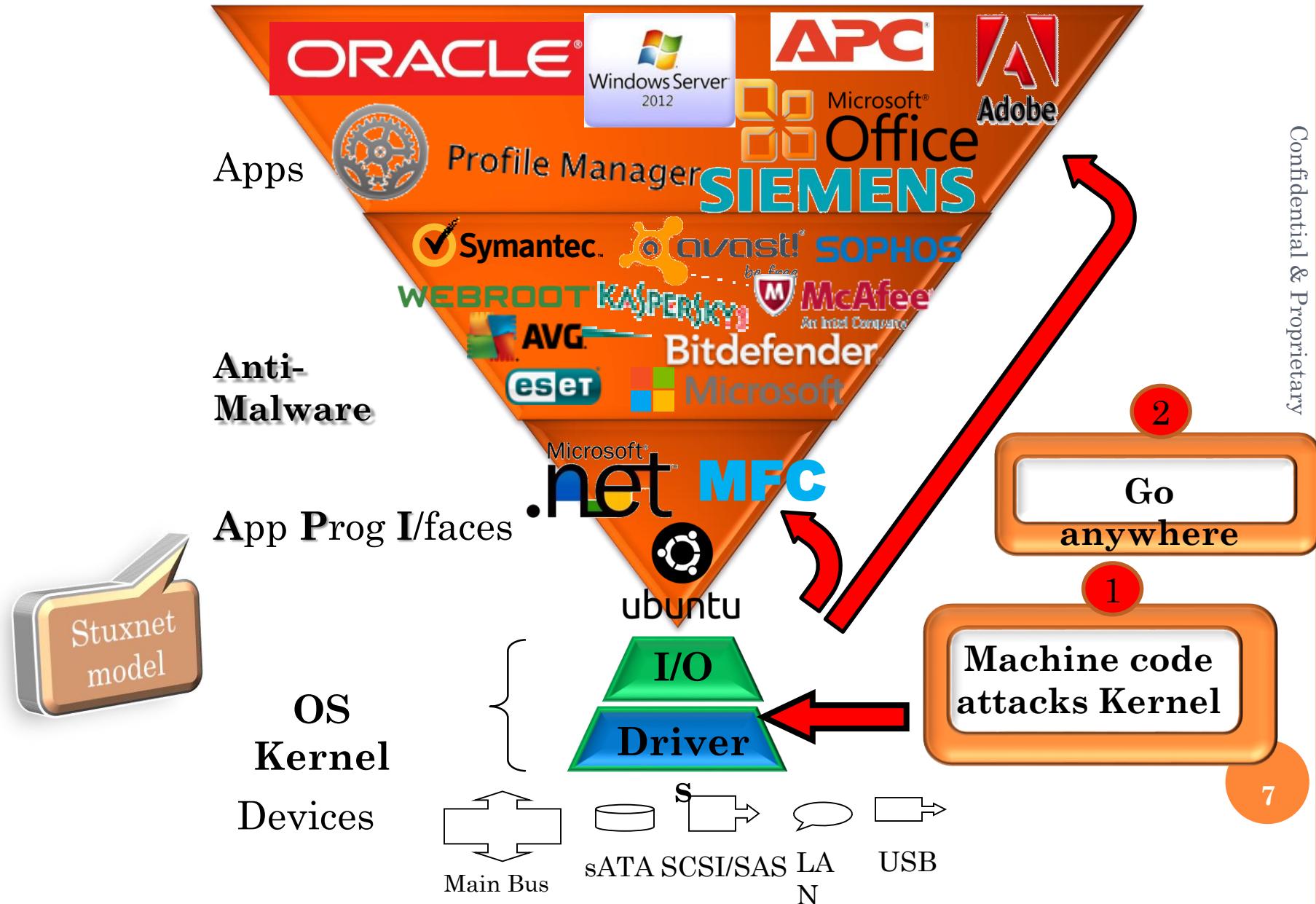
## The Problem

# MACHINE CODE – ATOM BOMB OF MALWARE

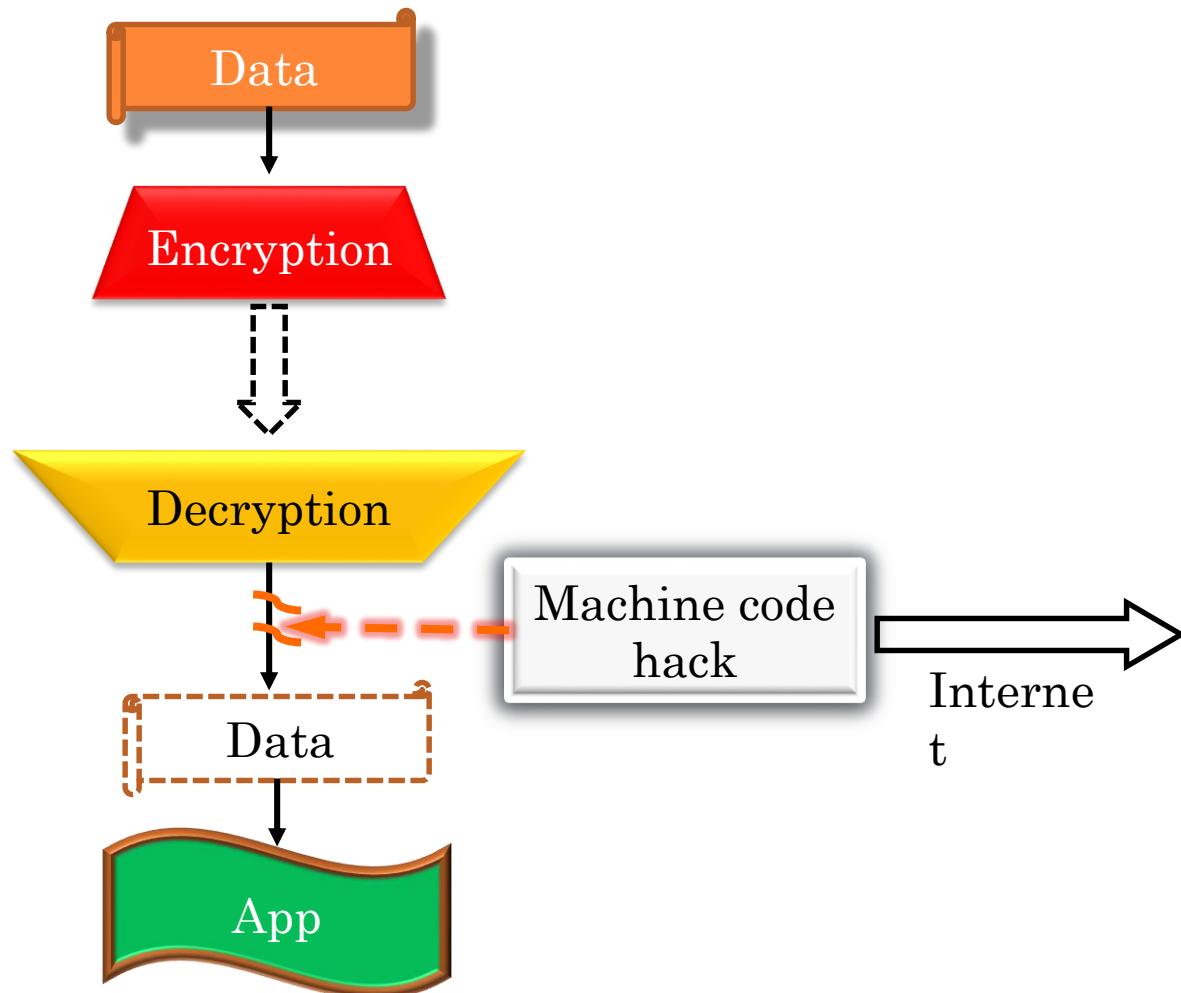
Machine code does  
any function OS can

**Machine code** malware  
can hack anything

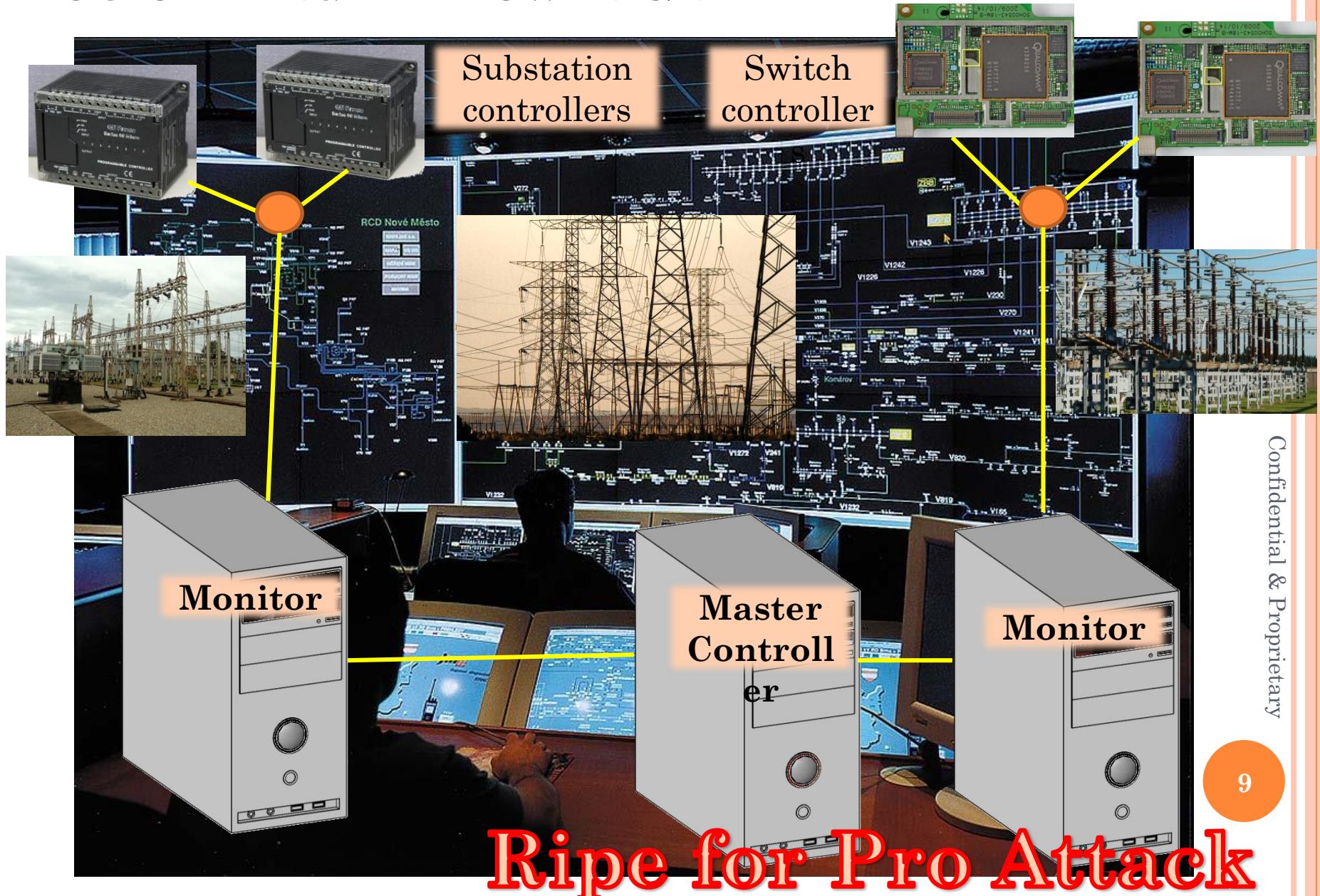
# PROS – CUT THROUGH CLUTTER



# ENCRYPTION NO OBSTACLE

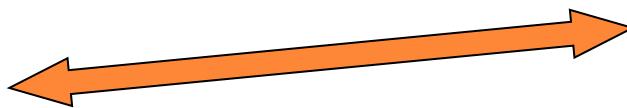


# JUICY TARGET – POWER GRID



## The Solution

# SENSITIVE DATA & MISSION ESSENTIAL FUNCS



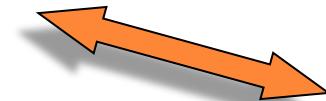
colorbox

CyBer  
Barrier

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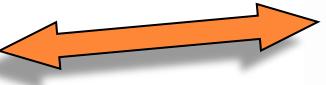
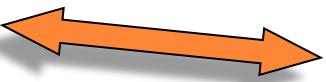
## The Solution

# 100% COMPATIBLE WITH WINDOWS/UNIX

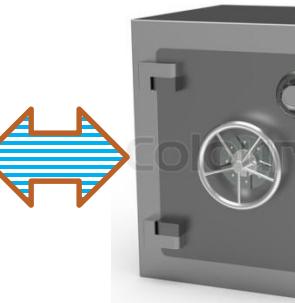
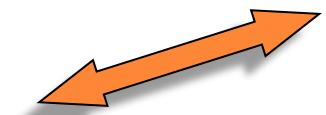


colorbox

CyB



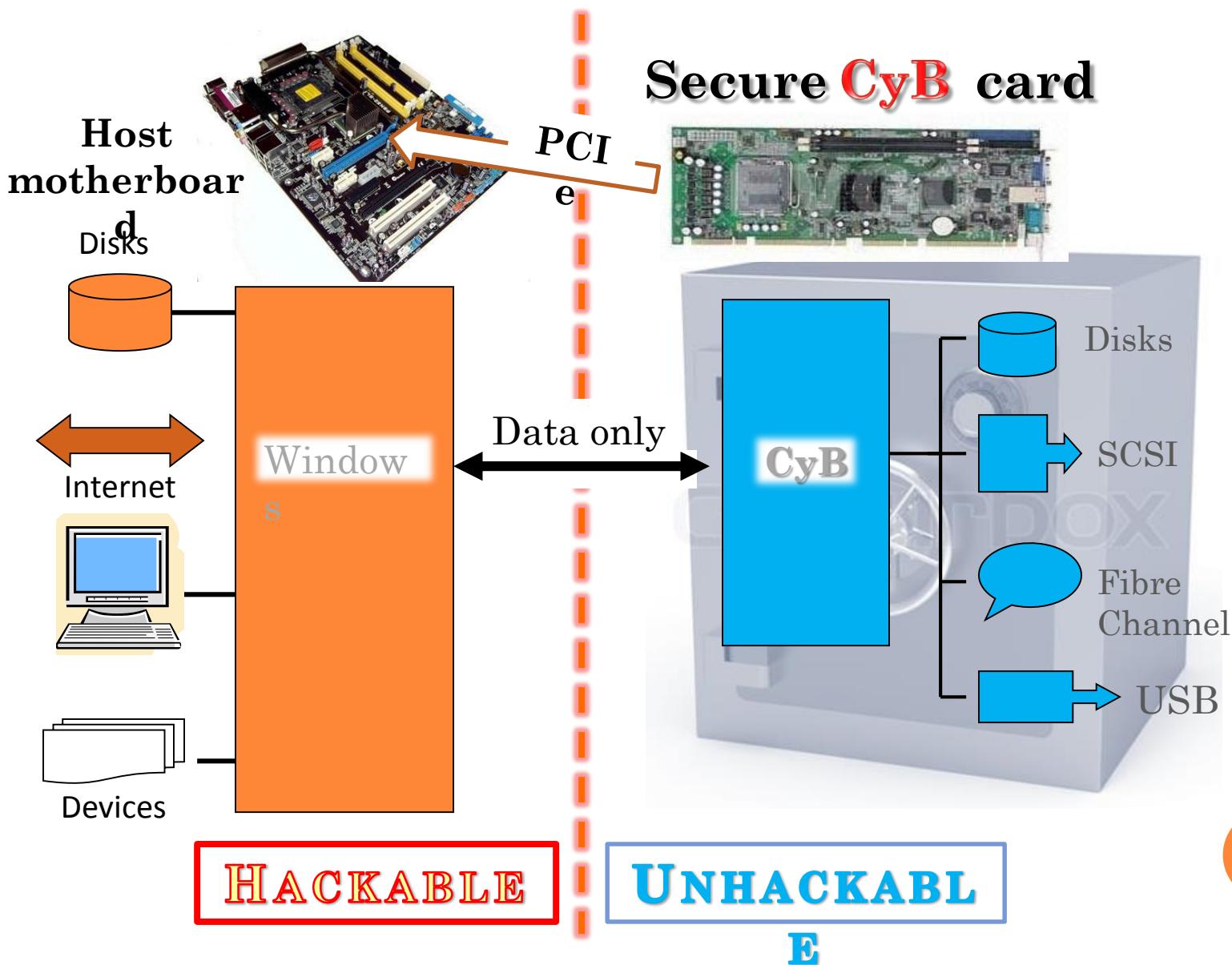
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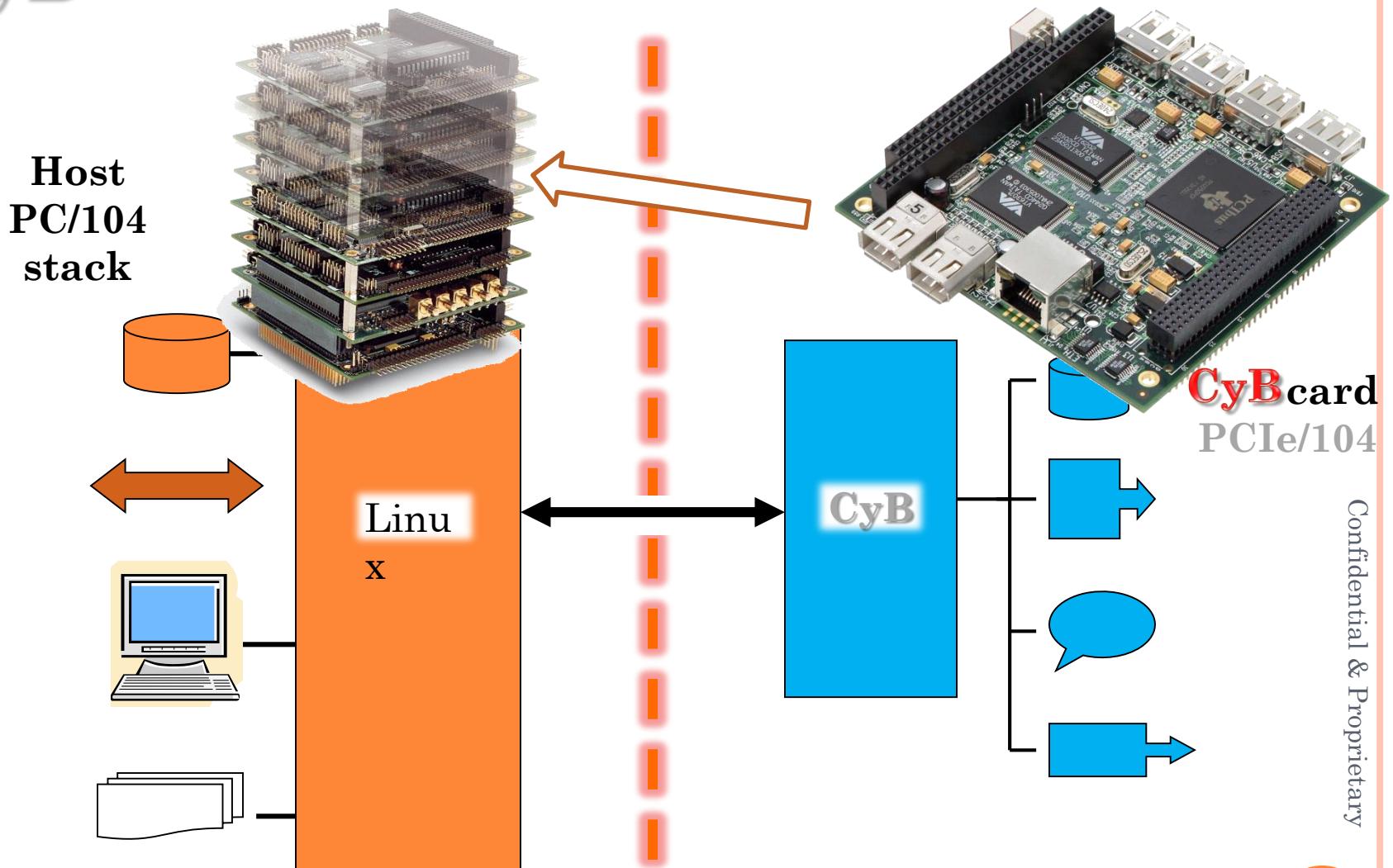
colorbox

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# CyB PHYSICALLY SEPARATE FROM HOST



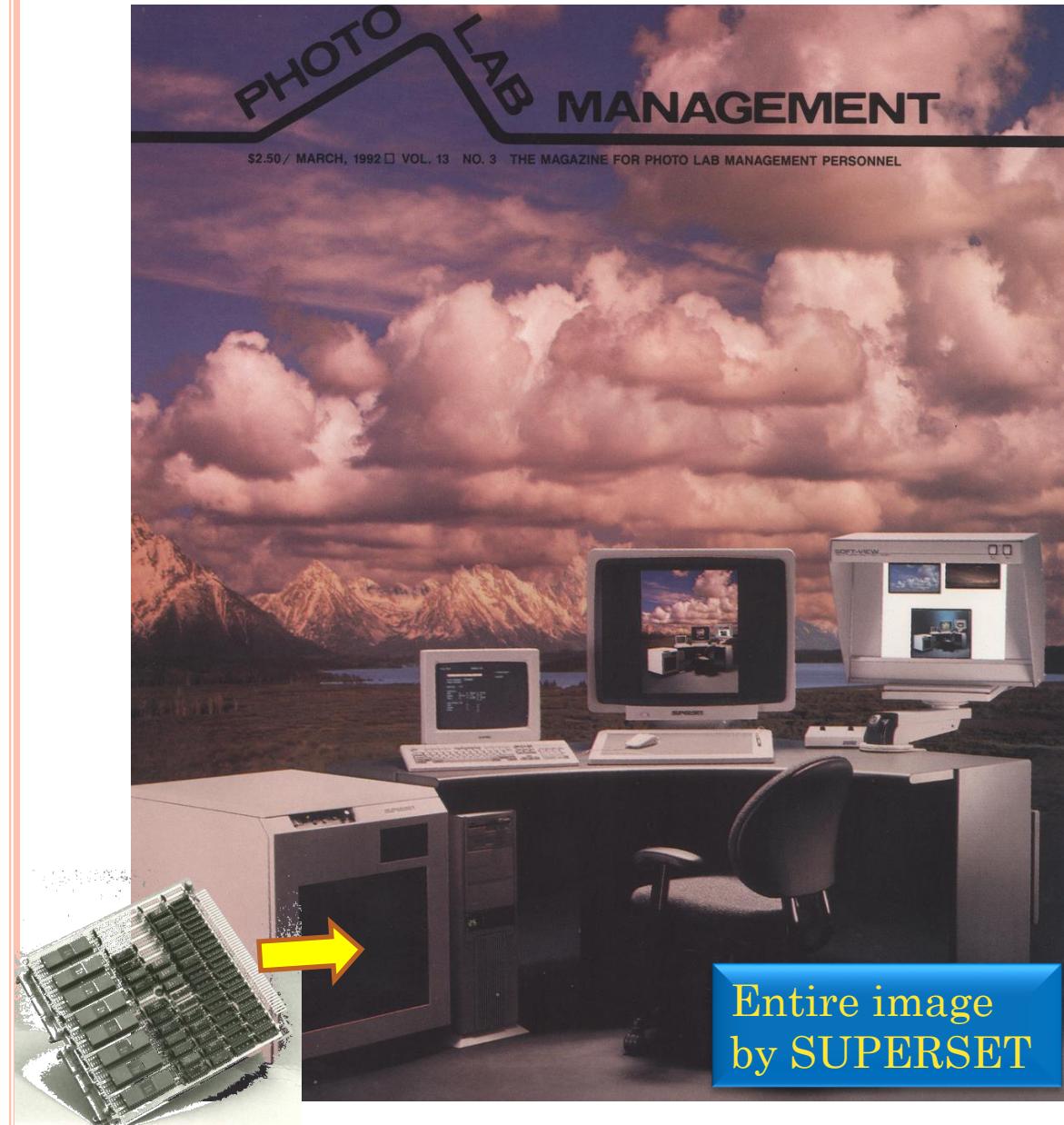
# CyB IDEAL FOR CONTROLLER



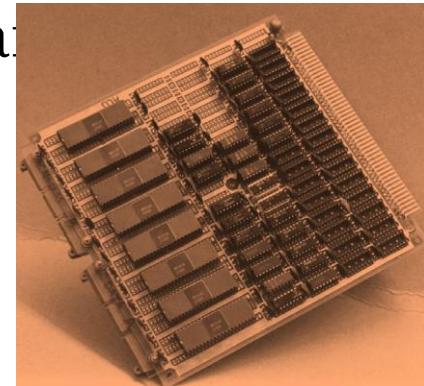
*He who defends everything defends nothing*

Frederick the Great

# CyB REVITALIZES SUPERSET WORKSTATION



Proprietary  
hardware

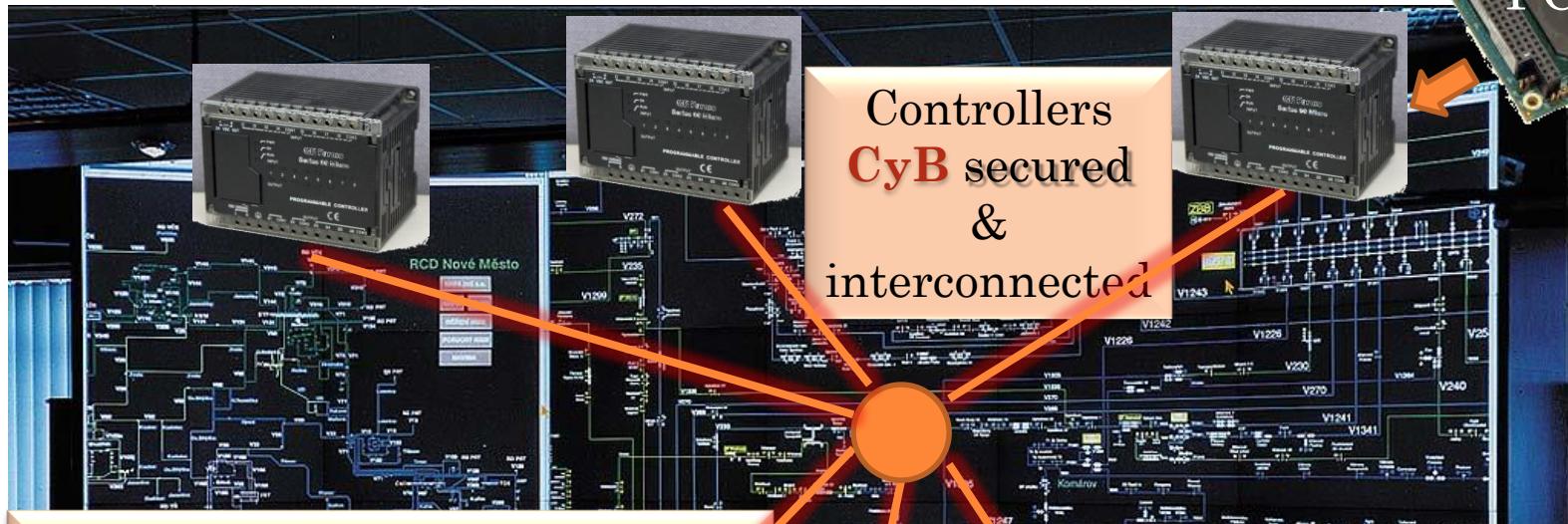


Converted to x86 CyB



Sun SPARC  
HP 9000  
CGI MIPS  
Not converted – gone

# EXAMPLE – HARDENED POWER GRID

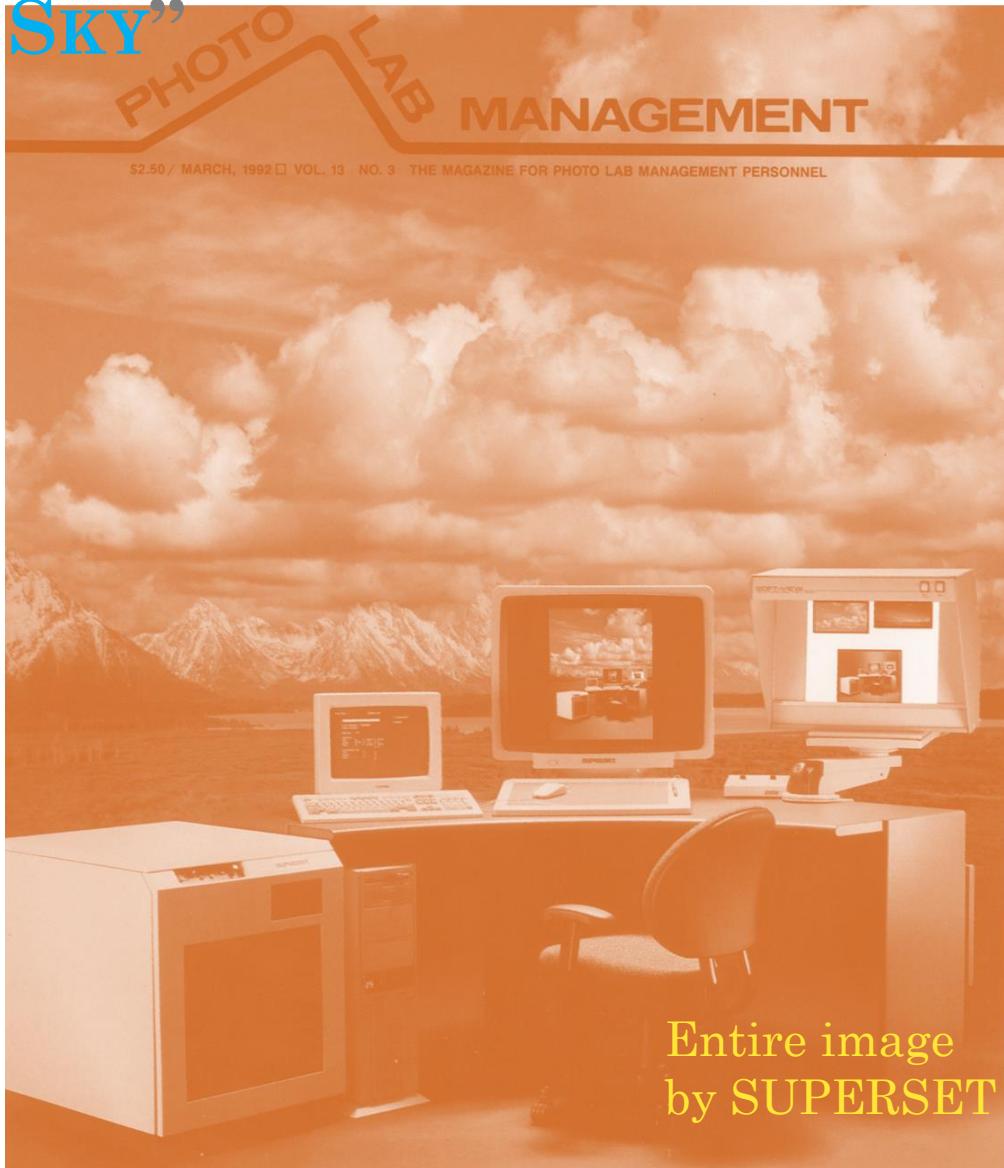


Mission Essential Functions  
CyB secured & interconnected



Confidential & Proprietary

# CyB SYSTEM FIELD PROVEN – NOT “BLUE SKY”



Proprietary hardware

15 yrs x 100s of pro customers  
(Texaco, Unisys, NWC, photo  
labs, Pentagon, Dept. Labor...)



Converted to Intel *x86* & *RISC*

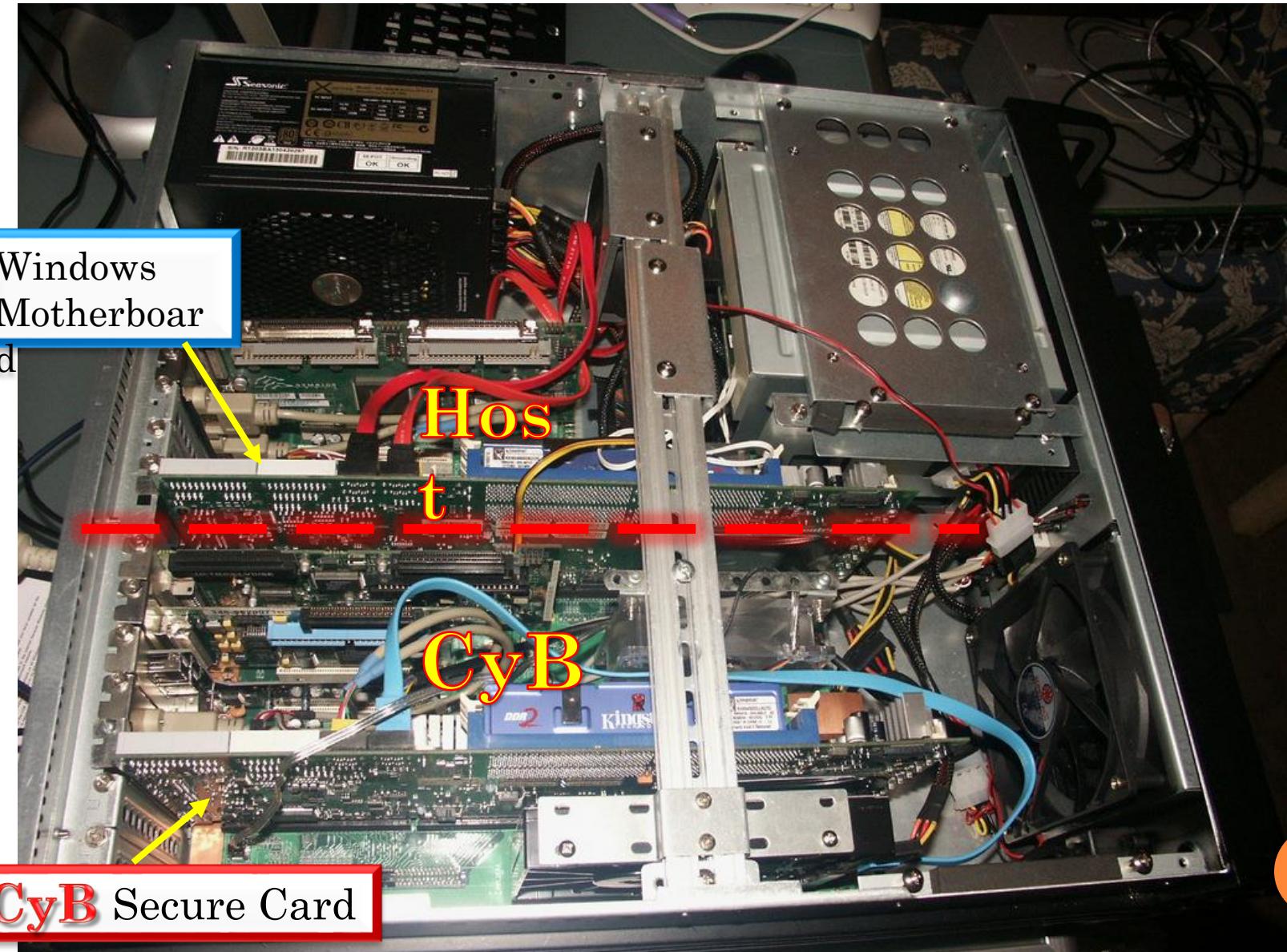
5 yrs more

(Texaco seismic big data, Bonardi  
compressor design, Jeppesen  
aviation weather...)

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Proprietary

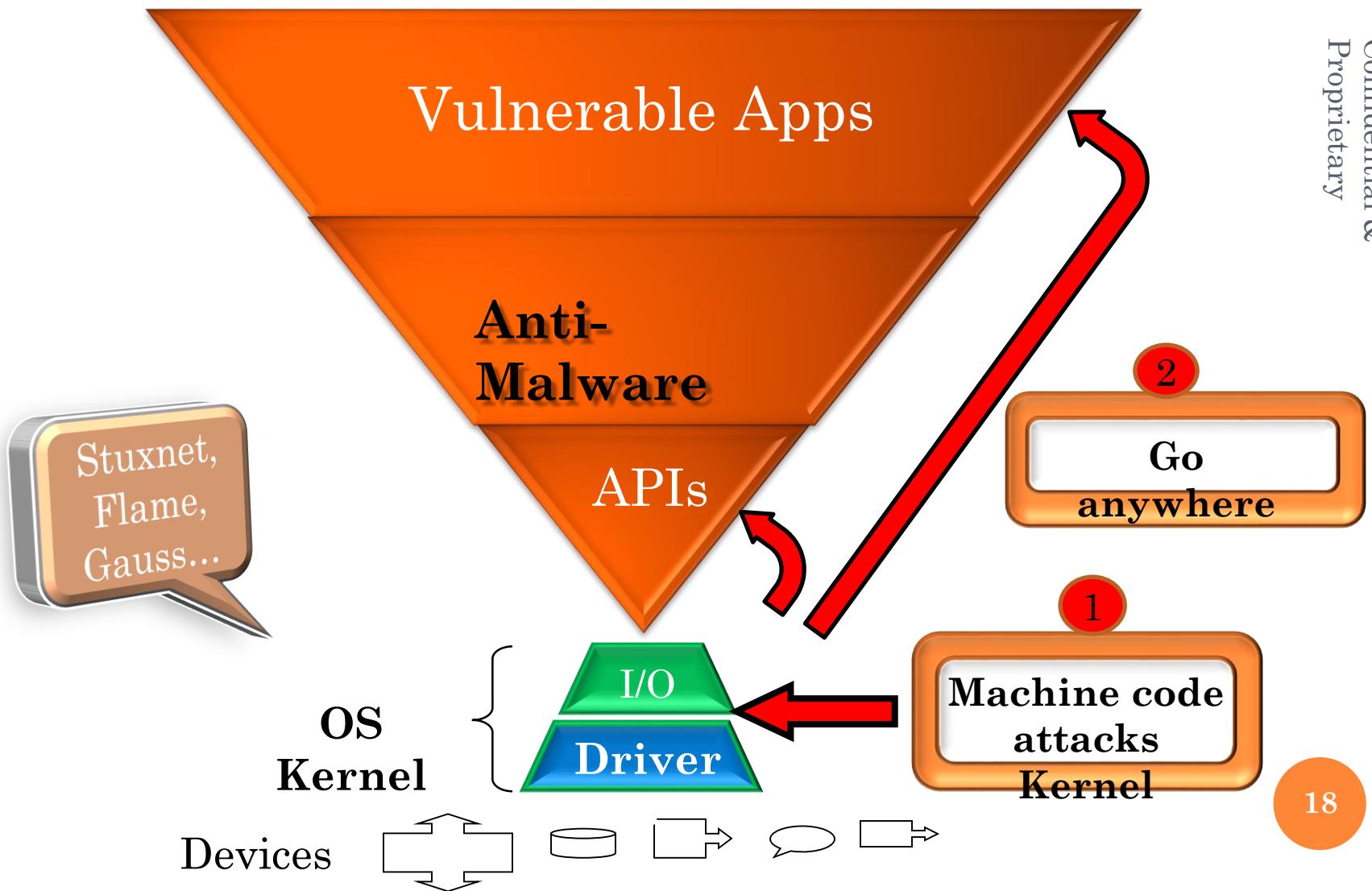
Solid foundation for  
Malware Barrier

# CyB PROTOTYPE AS SERVER

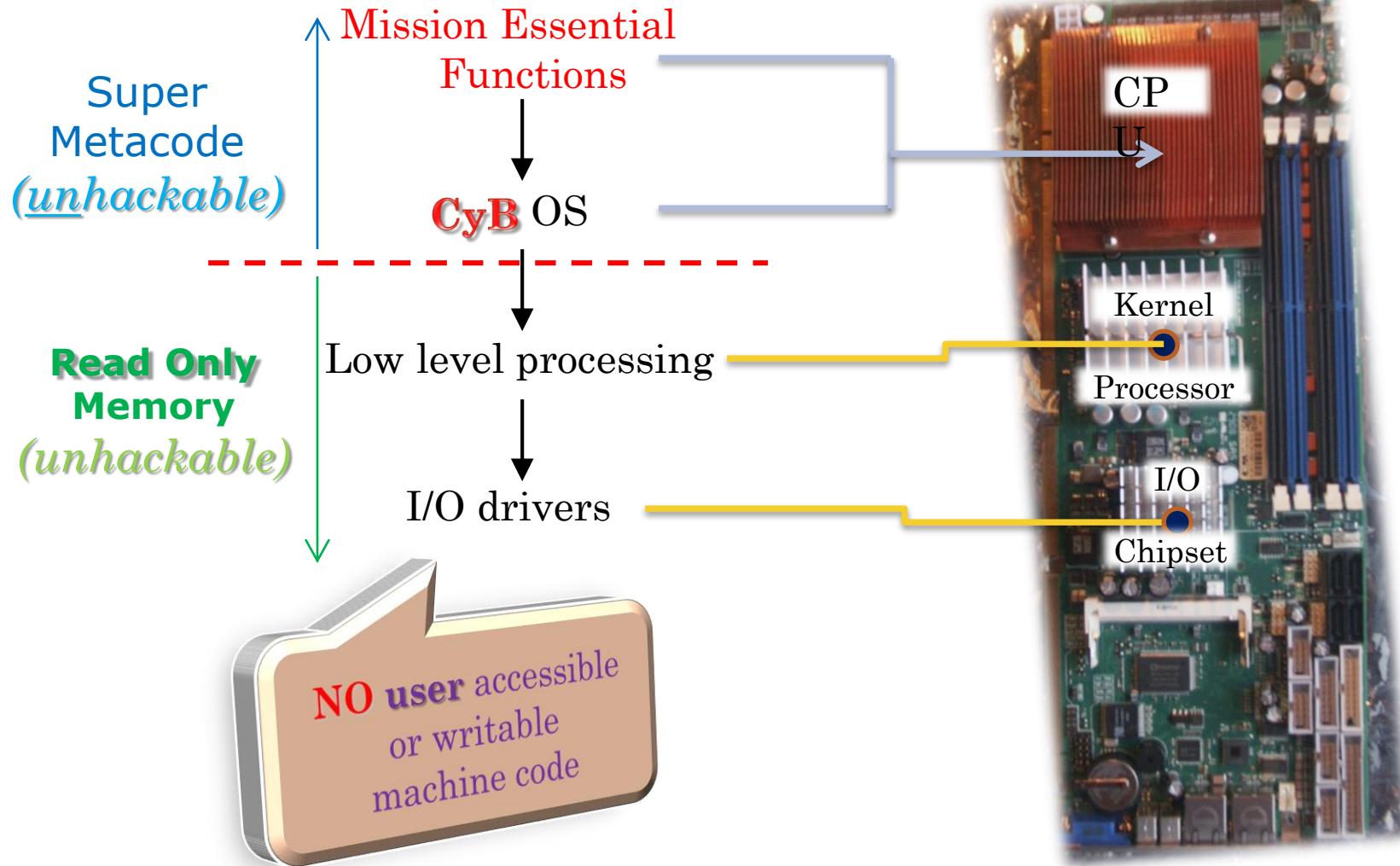


Confidential &  
Proprietary

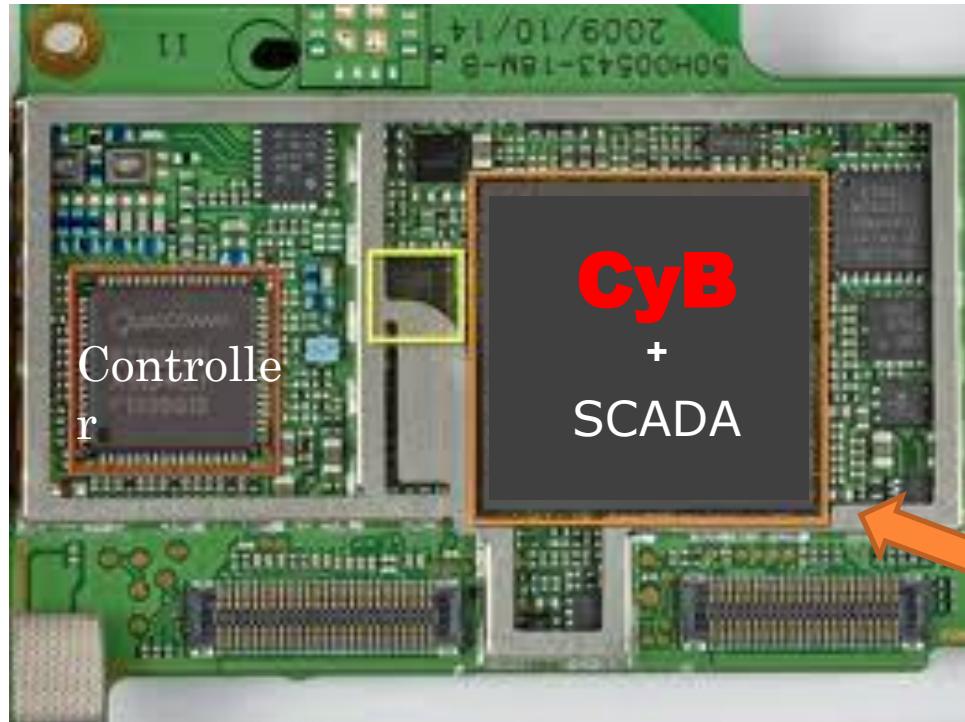
## PROS – HACK OS DNA



# CyB IMPENETRABLE – SUPERCOMPUTER MODEL

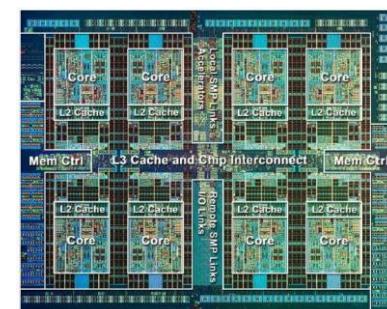
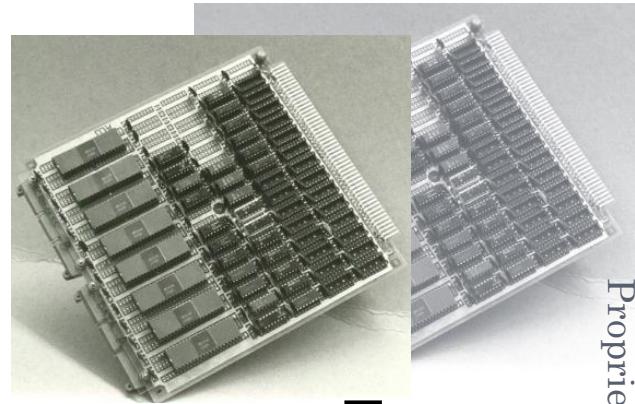


# INTERNET OF THINGS CRIES OUT FOR **CyB** SECURITY



Pt Of Sale boards hacked at Target  
CrowdStrike fried Apple Mac  
Stuxnet hacked Siemens controllers

SUPERSET bit-slice

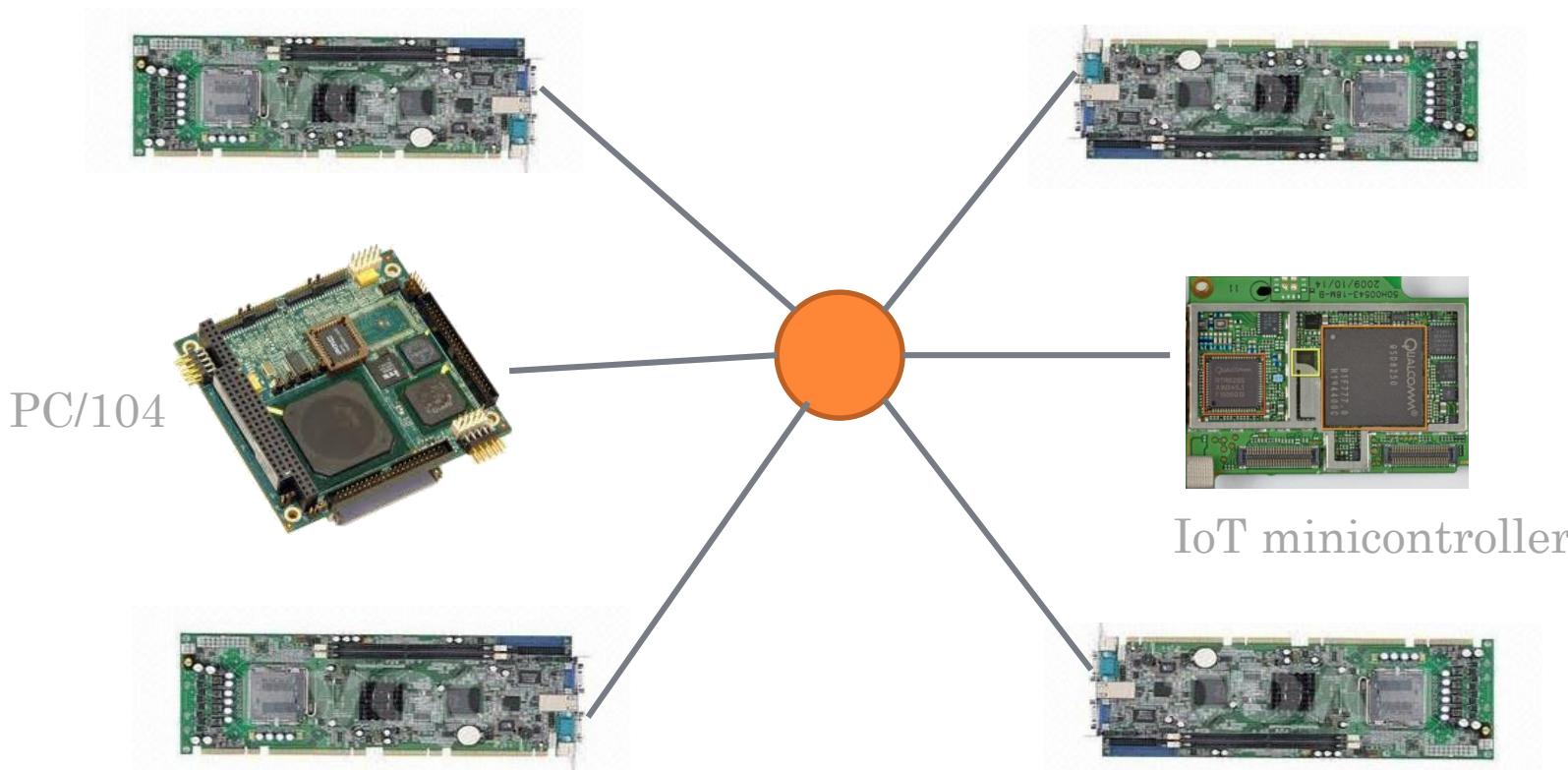


FPGA die

ACPI hack  
next 9/11?

INTERCONNECT  
**CyBUD**

Secure *Internal*

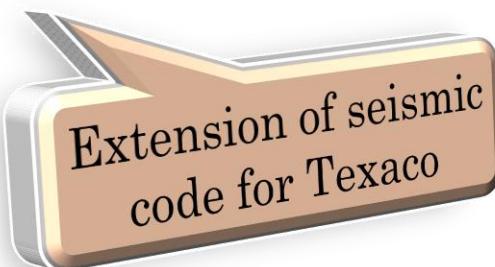


Proprietary + Unhackable

Confidential &  
Proprietary

# CyB INTERCONNECT ➔ FAR BEYOND A NETWORK

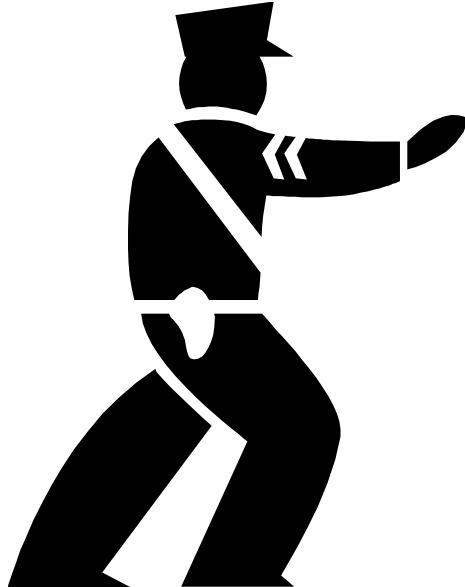
- ❖ Custom software protocol – Ethernet/Internet hackable
- ❖ No CyB connects/disconnects without permission
- ❖ Aware of every CyB – S/N, privileges, passwd...
- ❖ Every file tagged – agent ID, permissions...
- ❖ Metadata logged – date/time, user ID...
- ❖ Violations signaled at broadband speed
- ❖ Way above Windows “admin. privileges”



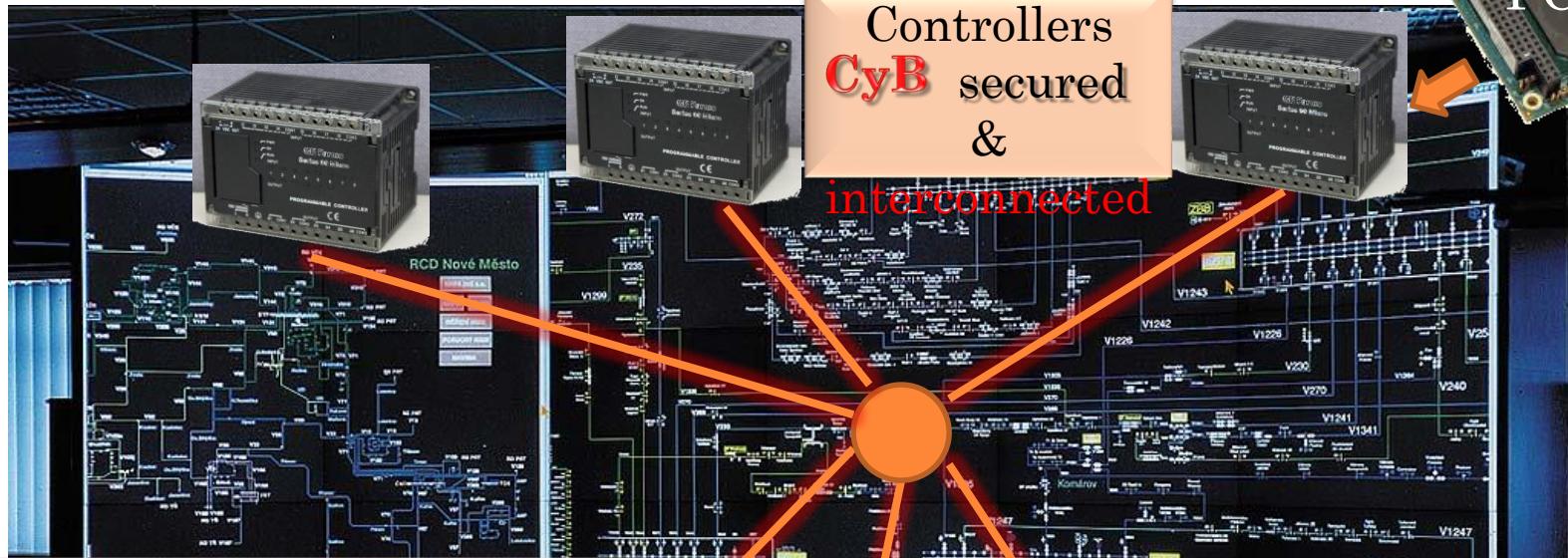
# INTERCONNECT CATCHES ROGUE EMPLOYEES

## B

IN THE ACT



# EXAMPLE – HARDENED POWER GRID

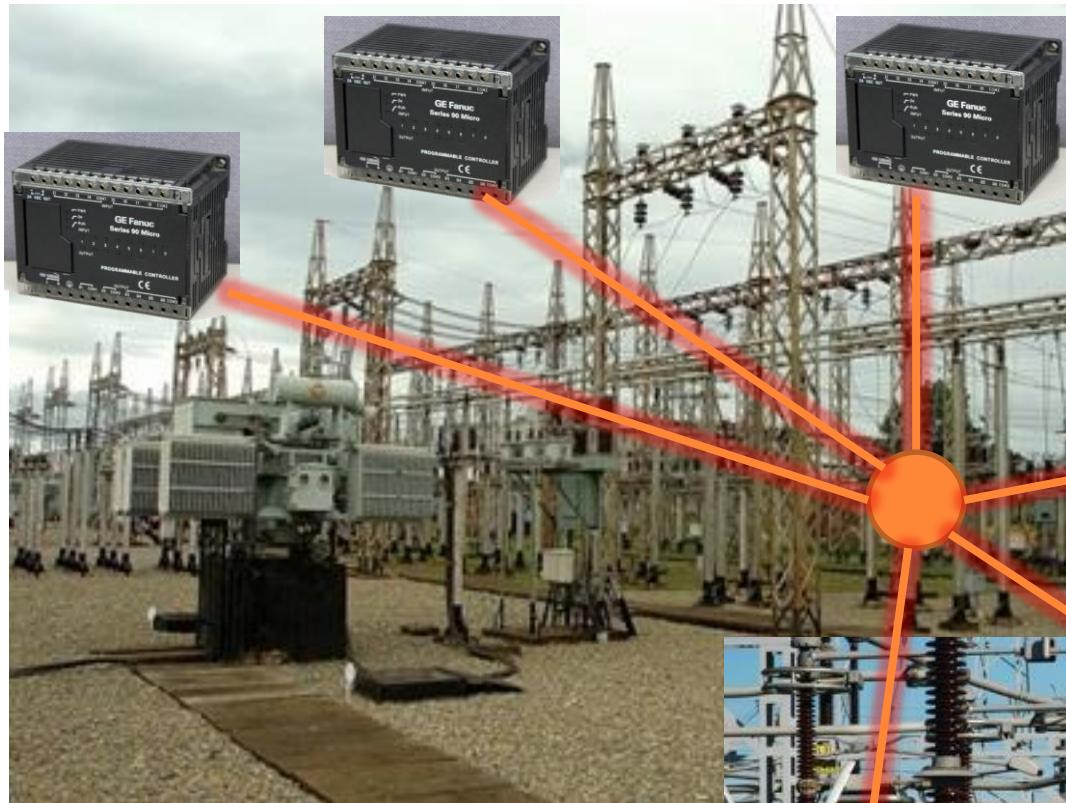


Mission Essential Functions  
**CyB** secured & interconnected



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Proprietary

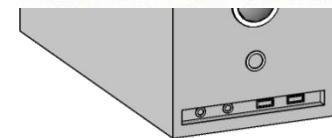
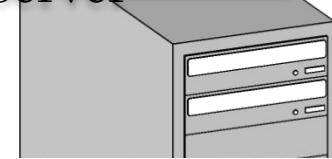
# EXAMPLE – HARDENED POWER GRID



Controllers  
**CyB** secured &  
interconnected



Controlling  
Server



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Proprietary

# Potential HARDWARE ASSISTED AI COMPETITION

Hardware + open source OS  
(Linux)

Custom  
OS takes  
years

Hardware + WinCE

Hardware + legacy mainframe OS

Unrealisti  
c

- ❖ Machine code can hack
- ❖ Huge rewrite to harden
- ❖ Too well documented – easy

hack

Confidential &  
Proprietary

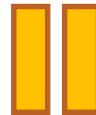
Customers – larger enterprises/agencies



Vast proven IP

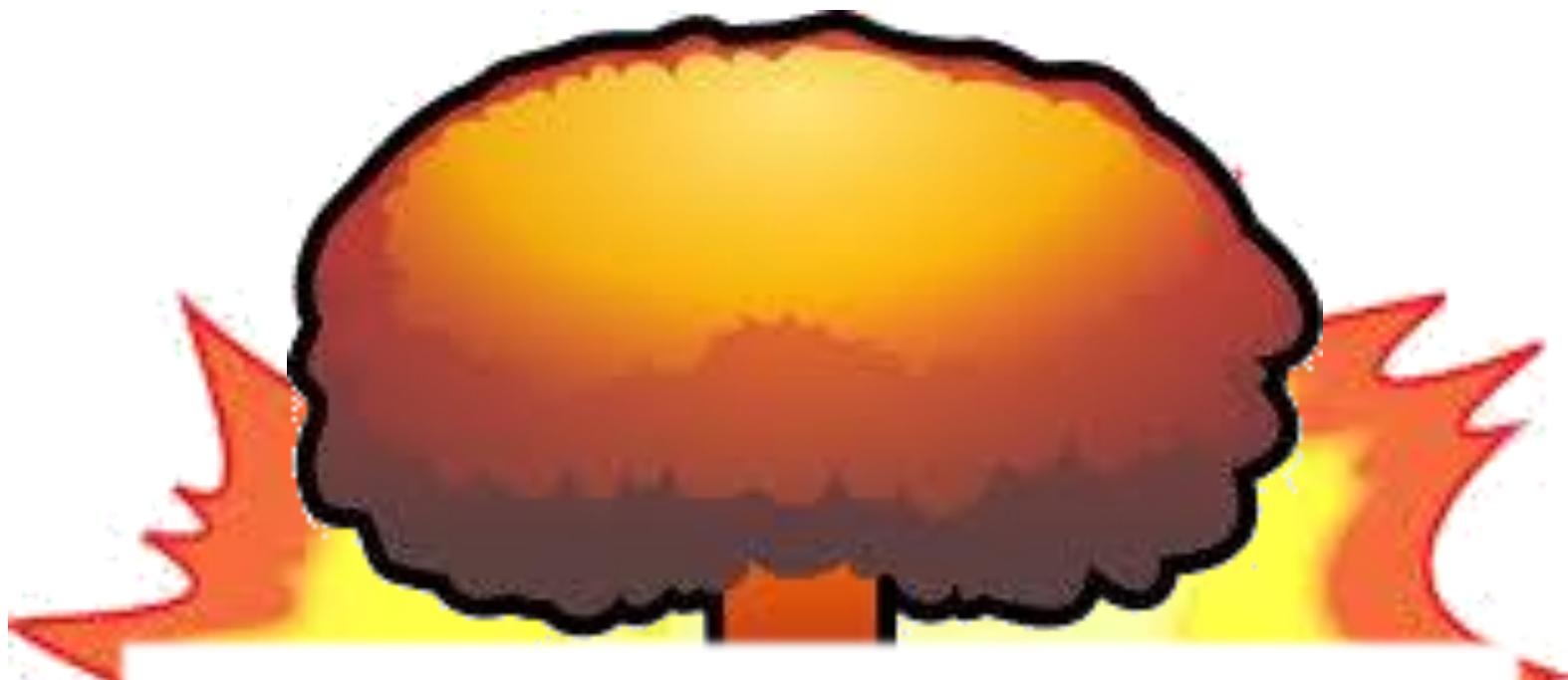


Fast growing opportunity



27

Attracts partner (IBM, HP, Google, Yahoo...)



Anti-malware thwarts TNT

CyB bombs thwarts **nuclear** ones

