

Going Global: The New Social, Economic, and Political Life of Standardization

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To Odin From Hephaestus:

or

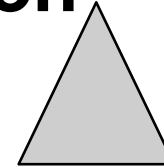
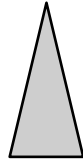
**The Migration to Complex and Ambiguous Societal Issues
from the Safety of Technological Solutions**

OVERVIEW

- ◆ **How It All Started (From There to Here)**
- ◆ **Where It Is Right Now (Sort Of)**
- ◆ **Where it's Going (We Think)**
- ◆ **What it All Might Mean (We Hope)**

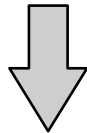
The Origin and Implications of Standardization

A Technical Decision

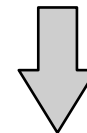


The narrow bone arrow head

The fat flint arrow head



The Implications



Gatherers

Live in caves

Domesticate herbivores

Sedentary

Hunters

Live in tents

Domesticate carnivores

Migratory

WHY CARE?

“The noisiest of those competitive battles will be about standards. The eyes of most sane people tend to glaze over at the very mention of technical standards. But in the computer industry, new standards can be the source of enormous wealth, or the death of corporate empires. With so much at stake, standards arouse violent passions.”

Economist, 27 February 1993

WHY REALLY CARE?

- ◆ Basis of IT standardization is in industrialization and its requirement for interoperable systems
 - ◆ Railroads needed standardized time & rail gauges
 - ◆ Commerce needed ways to transfer goods
 - ◆ Users needed reliability
- ◆ Promote innovation
- ◆ Multiple implementations lower product cost
- ◆ Increase possibility of technology dispersion
- ◆ Can limit monopoly behavior
- ◆ Support and drive interoperability

STANDARDS DEFINITION

According to ISO, (ICT) standards are "documents, established by consensus and approved by a recognized body, that provides, for common and repeated use, rules, guidelines or characteristics for activities or their results, aimed at the achievement of the optimum degree of order in a given context".

BACKGROUND CONDITIONS

- ◆ Initial ICT Standards Were “Stereo Model”
 - ◆ Plug and Play Components
- ◆ Standardization in the early 1980s
 - ◆ A technical discipline but a career killer
 - ◆ Meetings attended by standards “weenies”
 - ◆ No great influence on company direction or policy
- ◆ Major political battle access to IBM's storage systems market
- ◆ Organizationally, focus was on formal Standards Developing Organizations (SDOs)

BACKGROUND CONDITIONS

- ◆ Standardization until the early 1990s
 - ◆ “Telephone Model” Came Next
 - ◆ OSI Was to Allow Open Communications
 - ◆ Led - Indirectly - to the Internet
- ◆ Marketing becomes involved
 - ◆ Meetings now attended by standards “weenies” and by “marketing helpers” (and, God forbid, lawyers)
 - ◆ Transient influence on company direction or policy, significant impact on market hype

WHERE THEY CAME FROM

- ◆ There are International Organizations
 - ◆ ISO, IEC, ITU
- ◆ There are regional organizations
 - ◆ ETSI, CEN, CENELEC
- ◆ There are national bodies
 - ◆ ANSI, SANZ, DIN, BSI, AFNOR....
- ◆ ICT standardization system built for large, industrial users
 - ◆ Slow and expensive (inertia)
 - ◆ Allows exchange of IPR through complex cross-licensing
 - ◆ The Golden Age of RAND licensing

THE SITUATION CHANGES

- ♦ Five Major Types of SSOs (Process Based)
 - ♦ Trade Associations (ca. 1900)
 - ♦ National Formal Organizations (ca. 1930)
 - ♦ International Formal Organizations (ca. 1945)
 - ♦ Consortia (ca. 1985)
 - ♦ Alliances/Open Source Movement (ca. 1998)
 - ♦ Consortia and Alliances Are Growth Areas
- ♦ Responses to Changes in Value Chain

USERS ACCEPT ALTERNATIVES!

WHY I WORRY – (SLIDE 1)

- ◆ Failure of Major International Organizations
 - ◆ ISO is Weak; ITU is Trying to Recover, Consortia are narrowly focused and vulnerable
 - ◆ No coordination between fora
 - ◆ Multiple organizations, multiple rule sets
 - ◆ Participation and acceptance are shrinking
 - ◆ IPR regimes of groups don't work together
- ◆ Balkinazation of standardization
 - ◆ Each region (US, Europe, China) will pursue own course
 - ◆ We lose benefits of integration, interoperability, predictability and innovation

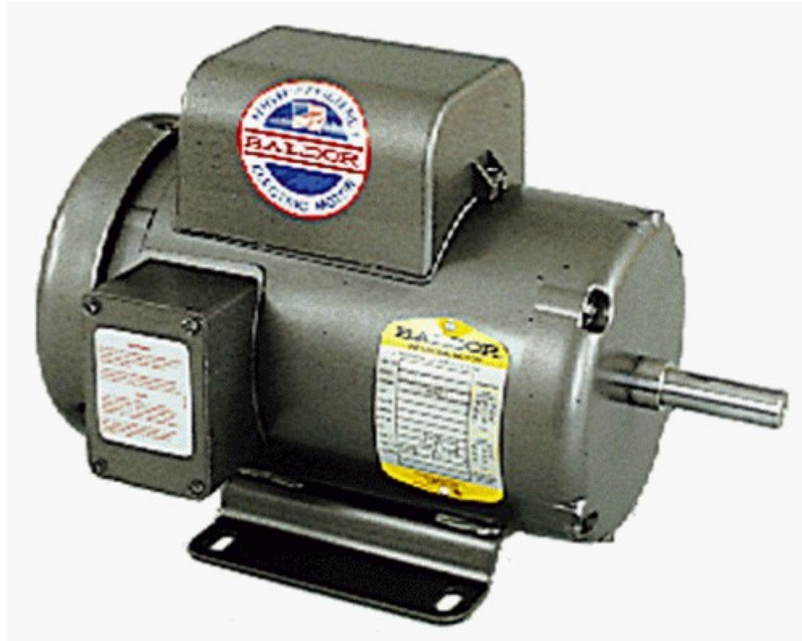
WHY I WORRY – (SLIDE 2)

- ♦ **Standardization is:**
 - ♦ Not Predictable:
 - ♦ Rules subject to “interpretation”
 - ♦ Interpretation depends upon the “loudest voice”
 - ♦ Not Inclusive:
 - ♦ Many companies, organizations and governments can't afford to play
 - ♦ Deliberately slanted to favor G8/US
 - ♦ Not Open
 - ♦ Openness focused on “process”, not outcome.
 - ♦ Pay to play applies to all organizations

WHY I WORRY – (SLIDE 3)

- ♦ We're also standardizing the wrong thing the wrong way
- ♦ Interfaces make independently designed, heterogeneous systems work together
- ♦ Lower substitution costs
- ♦ Lower market entry and exit costs
- ♦ Spur innovation at more useful levels (e.g. Where interoperability isn't threatened)
- ♦ Erases fear that you're going to be victimized when you implement a standard

IMPLEMENTATIONS VS. INTERFACE STANDARDS



IF STANDARD IS CONTROLLED BY PATENT?



**If you control interface standards,
you can exclude
ALL possible implementations!**

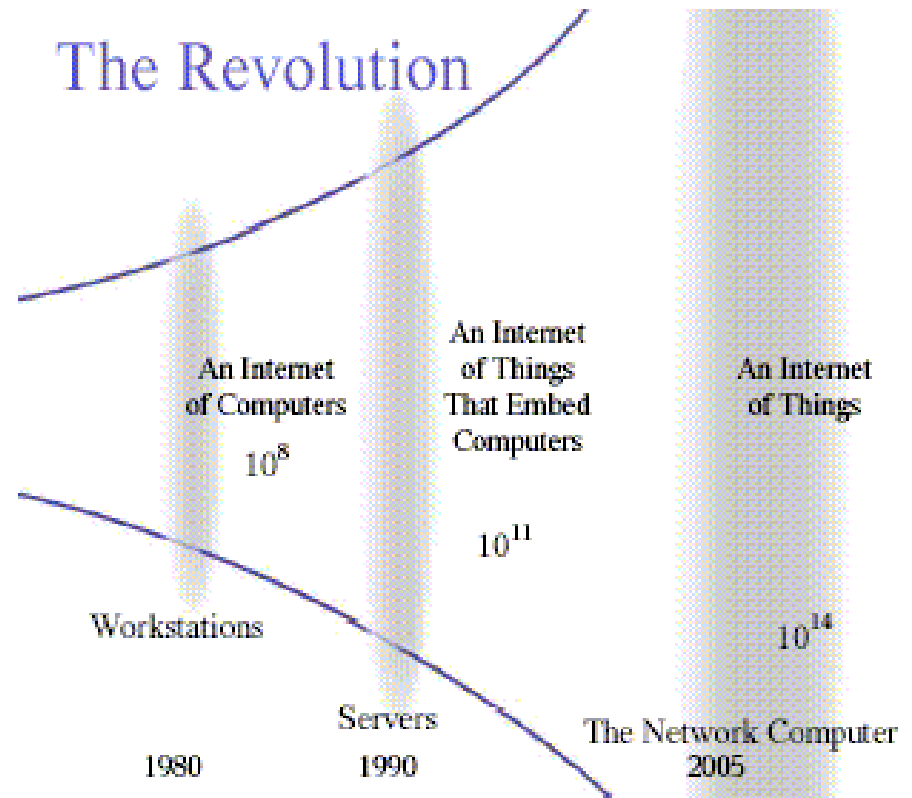
WHY I WORRY – (SLIDE 4)

- ♦ The rate of business innovation is enormously accelerated by the global Internet - however
 - ♦ The rate of our global standard setting system hasn't kept pace
- ♦ The gap is easily exploited
 - ♦ Land grabs for interface control points
 - ♦ Exploitation of IPR reinforces them
 - ♦ “Convergence” exacerbates the situation
 - ♦ End-users suffer limitation of choice, increased cost, complexity and confusion
 - ♦ Innovation suffers
 - ♦ Economy suffers

THE “INTERNET OF THINGS”

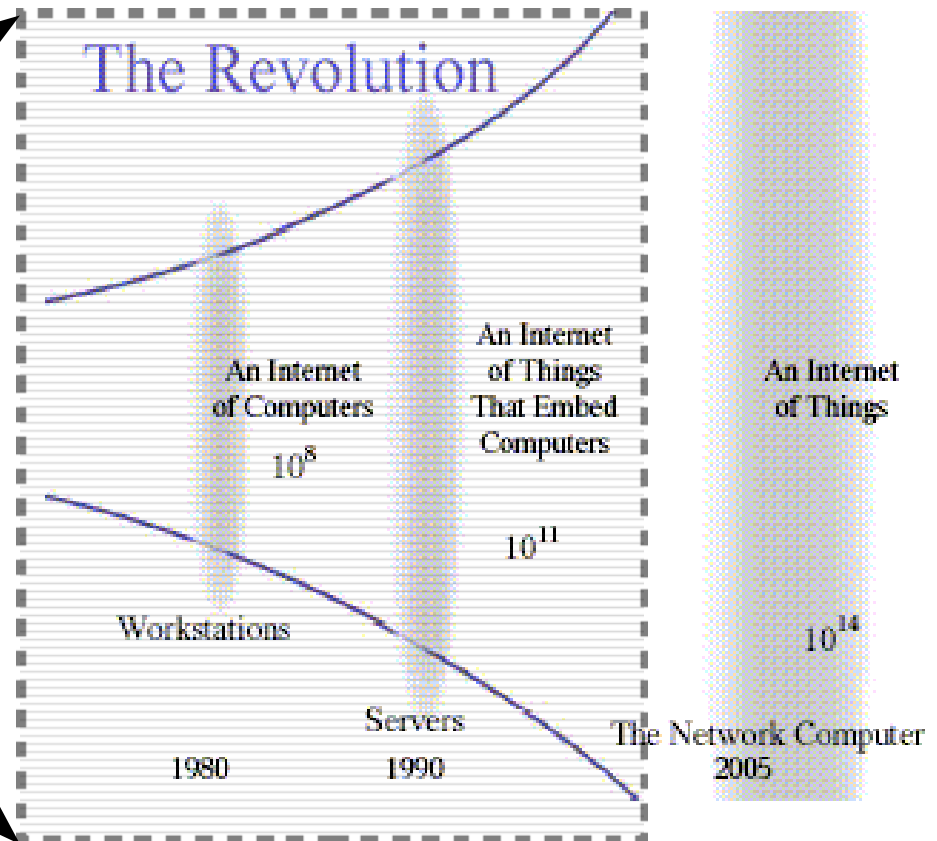
- ♦ The “Internet of things” includes:
 - ♦ Anything that indicates state change and talks about it or remembers it or reports it
 - ♦ Real, virtual, legal, or any combination...
- ♦ The “Internet of things” is:
 - ♦ Based on IPV6 and IPV4, XML, Web Services
 - ♦ Wired and Wireless structures
 - ♦ Real or Virtual data from everything, everywhere
- ♦ Billions of bits, all moving simultaneously

WHY I WORRY - THE “INTERNET OF THINGS” IS COMING



WHY I WORRY - THE “INTERNET OF THINGS” IS COMING

Between 100
and 10,000
new or used
standards will be
needed here in
the next 5 years



**IT IS NOW TIME FOR
ODIN
TO MAKE AN
APPEARANCE**

THE ROLE OF STANDARDS

- ◆ Standards Are Social Policy Tools
 - ◆ They are “Impure Public Goods”
 - ◆ They can Balance or Manage Social Growth
- ◆ Standards Have Multiple Economic Roles
 - ◆ They can be used to Create, Develop, and Regulate Markets
 - ◆ They can set Industry Policy
- ◆ Standards are also Management Tools
 - ◆ They aid in change management
 - ◆ They allow structured market development

CURRENT MODEL FAILURES

- ◆ Private Sector Model
 - ◆ Based on “Pure Capitalism” ideal
 - ◆ Public good no longer served
 - ◆ WSIS indicates high dissatisfaction
 - ◆ Precedent and now IPR used to control
- ◆ European Model
 - ◆ Based on social welfare/engineering
 - ◆ Too restrictive for business
 - ◆ Limited to specific economic and political areas
- ◆ No model exists to move forward

A FUTURISTIC VIEW

**THE FUTURE NEVER
“JUST HAPPENED.”**

IT WAS CREATED.

Will and Ariel Durant

WHAT IS NEEDED

A New Definition of Standardization:

“Standardization is a belief that the market has the ability to understand and chart a valid future direction through the use of collective wisdom, to understand the impact of change on itself, and to adjust to that change. Standards are one of the specific change agents the market can use.”

THE MIDDLE WAY

- ◆ Accept and embrace the best of both models
 - ◆ Thesis-antithesis produces a synthesis
 - ◆ Research and analysis of current system is necessary
 - ◆ Sun can share academic data on current system
 - ◆ Accept some of the capitalism
 - ◆ Impose light, but enforced, requirements
- ◆ Result: The Middle Way Standards Model
 - ◆ Use regulation lightly but consistently
 - ◆ Control the SSO
 - ◆ By controlling source, process is managed
 - ◆ By managing process, output is managed

THE ULTIMATE FEAR

“I am a tea-merchant, sir. I have spent forty years combating the desire of my fellow-countrymen to drink Ceylon tea instead of the China tea which was universally drunk in my youth.”

I thought it charmingly characteristic of him to spend a lifetime in persuading the public to buy something they didn't want rather than something they did.

W. Somerset Maugham

“The Round Dozen”

Thanks!

Carl Cargill
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