

STANDARDIZATION AND THE INFORMATION TECHNOLOGY INDUSTRY

(or)

Walden Pond Has Been Drained!

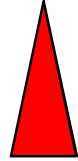
STANDARDS

“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.”

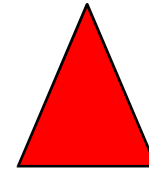
The Economist, 27 February 1993

WHY THEY ARE IMPORTANT

Technical Decision



Narrow Bone Arrow Head



Fat Flint Arrow Head



Implications



- Gatherers
- Live in Caves
- Tame Herbivores
- Sedentary

- Hunters
- Live in Tents
- Tame Carnivores
- Migratory

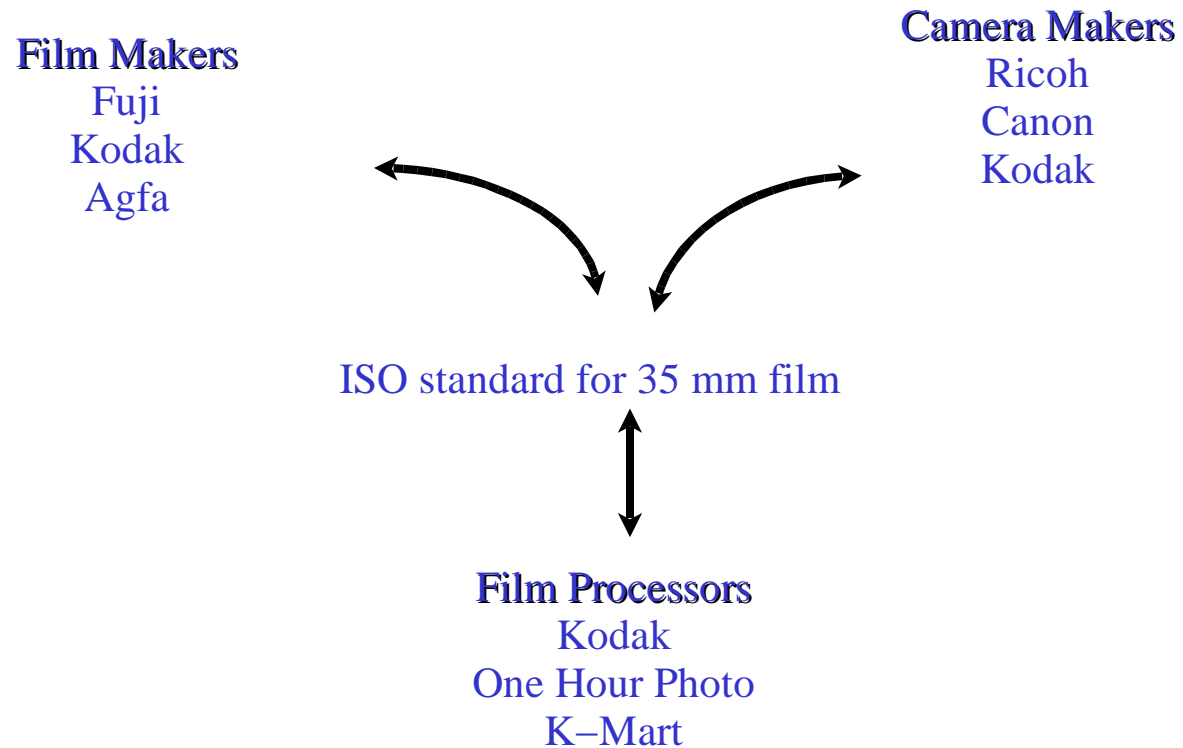
STANDARDIZATION

- A Multi–Billion Dollar Discipline
 - Applies to All Facets of Business
 - The Basis for Ensuring Future Stability/Sales
- A Management Tool for Business
 - A Standard Is a Description of How to Provide a Product or Service
 - It Must Mirror Business Conventions and Needs
- **A Standard Has NO Intrinsic Worth**

TYPES OF STANDARDS

- Environmental, Homologation, Product Safety Standards
 - Legally Necessary to Sell a Product
- Attribute Standards (Quality, Ergonomic)
 - Makes Product Attractive to Users
- Technical Interface Standards (XML, UNIX)
 - Required to Meet User Business Needs
 - Allows Creation of “Interoperable Products”

INTERFACE STANDARDIZATION



October 5, 2001

Carl Cargill
SIIT 2001

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THE STANDARDIZATION ENVIRONMENT

- Standards MUST Reflect Their Creation Environment
- Business Has a Value Chain
 - All Product Elements Must Contribute
 - The Chain Forces Its Characteristics on the Elements
- Need for “Standardization” Immutable
 - Only the Process of Creation Can Change

CREATION PROCESSES

- Creation Processes Tied to the Value Chain
 - When the Value Chain Needs Standardization Solution, Nature of the Problem Leads to Solution
- The Process of Creation Is **THE** Variable
 - ANSI Process Result of Congressional Threat
 - Consortia Process Result of Need for Speed
 - Open Source Resulted From IPR Challenges
- **Need for Standardization is Constant**

STANDARDS AND THE VALUE CHAIN

- Regulatory Standards Are Slow Moving
 - Slow and Careful Is Good
- Attribute Standardization Is Difficult
 - Definition of Attributes Is Social/technical
 - Slower Process Is Needed
- Interface Standardization Is Fast/contentious
 - Interfaces Can Define Possible Products/market Sizing/directions
- Changes With the Nature of the Industry

IMPLICATIONS

- Industry Value Chain Impacts SSO Process
 - Industry Decides Standardization's "Value Add"
 - Standardization Initiatives Responding to Need Are Rewarded
 - Older Forms of Structure Are Not Destroyed – Just Abandoned Gradually
- As the Value Chain Changes, So Do the Requirements for Process

STANDARDS SETTING ORGANIZATIONS (SSOs)

- 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. 1995)
- All Were Responses to Changes in Industry Value Chain

THE ORIGIN OF THE “FORMAL STRUCTURE”

- The Formal Process Is Supposed to Protect Users and Small Providers
 - Initiated in U.S. In 1970 Plywood Scandals
 - Response to Possible Government Intervention
 - Is Highly Process Driven
- No Significant Change Since 1980
 - IT Has Same Rules As Hydro–electric Dams
 - “One Set of Rules” Fits All
 - *OPENNESS* Is the Prized Attribute

VALUE CHAIN PROBLEM

- Collapse of the IT Technology Life Cycle
 - Product Life Cycle Shorter Than Standards Cycle
 - Complex Rules Viewed As Choking the System
- “Cooperative” Spirit Collapsed
 - Marketing and Market Positioning
- Industry Needed to Create a New System for “Faster Standardization”

VALUE CHAIN SOLUTION

- Consortia Were the Industry Response
 - Highly Focused, Like Minded Organizations
 - Same Companies Funded SDO's and Consortia
- National Cooperative Research and Production Act of 1993
- Alternative methodologies available
and

USERS ACCEPTED THE ALTERNATIVES

VALUE CHAIN PROBLEM

- The World Wide Web
 - Interconnection and Immediacy
- Immediacy of Competition, Cooperation
 - Multinational Markets and Players
 - Constantly Changing Playing Field
- Intellectual Property Concerns
 - National Regimes, SW Copyright, RAND Terms

VALUE CHAIN SOLUTION

- Alliances
 - Loose Confederation of Organizations
 - Entrance Fees, Few Process Rules
 - Dominant Players/Leaders
 - Standardized Existing Practices
 - Provides Immediate Stability, Lessens Risk
- Open Source
 - Intellectual Property Ownership Mitigated
 - Solution to the “RAND” Question

A THOUGHT

**“We can’t solve problems
by using
the same kind of thinking
we used
when we created them.”**

Albert Einstein

WHAT HAS HAPPENED

□ 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.

WHAT THIS MEANS

- There Is No “Correct Way” to Standardize
 - Users Use and Accept All Three Methods
 - Users Usually Don’t Care About the Process
- In Each Change of the Value Chain:
 - Business Needs and Decisions, Not Process or Rules, Drive Standards Creation
 - Process Is a Tool to Aid in Creating “Market Needed” Standards

TOWARDS A NEW PARADIGM

- Treat Standardization As a Discipline
 - Standards Are a Management Tool
 - There Must Be a Structure and Form
 - Look Forward, Not Longingly at the Past
- Determine Its Value To:
 - A Product
 - An Industry
 - A Value Chain
- Use It for Planning and Structuring Chaos

**“To be engaged in opposing wrong
affords but a slender guarantee
for being right.”**

William Gladstone

CONCLUSION

- ❑ We Have Been Too Busy Opposing One Another
- ❑ We Are All Engaged in Standardization – Whether in Sdos, Consortia, or Alliances
- ❑ We Believe in Fundamental Truths About the Good of Standards
- ❑ We Should Be Focusing on Those Who Would Remain Proprietary

“It is not enough that you should understand about applied science. Concern for the man himself and his fate must always form the chief interest of all technical endeavors; concern for the great unsolved problems of the organization of labor and the distribution of goods in order that the creations of our minds shall be a blessing and not a curse.”

Albert Einstein