



Open Systems for Open Minds Sun's Vision and Strategy for EDU

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**EMINENT
IV**

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Genève**

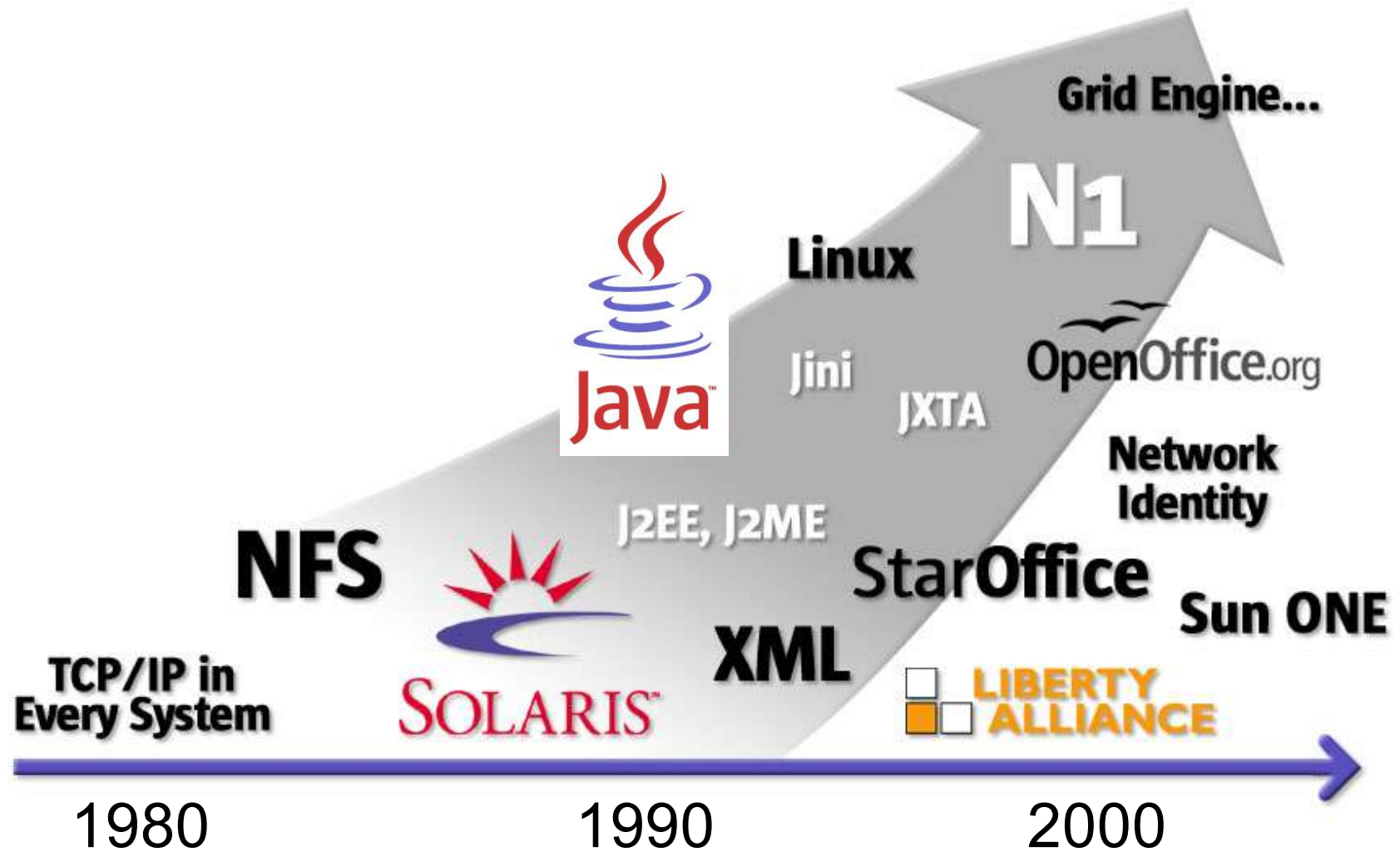


Sun's Roots are in Education

- Founded in 1982, **Sun = Stanford University Networks**
- Sun is a leading provider of open network computing to higher education worldwide
- Universities are critical R&D centers for Sun
- *Our education strategy is good business:* today's K-20 students are tomorrow's business contributors and leaders



Innovation Pays

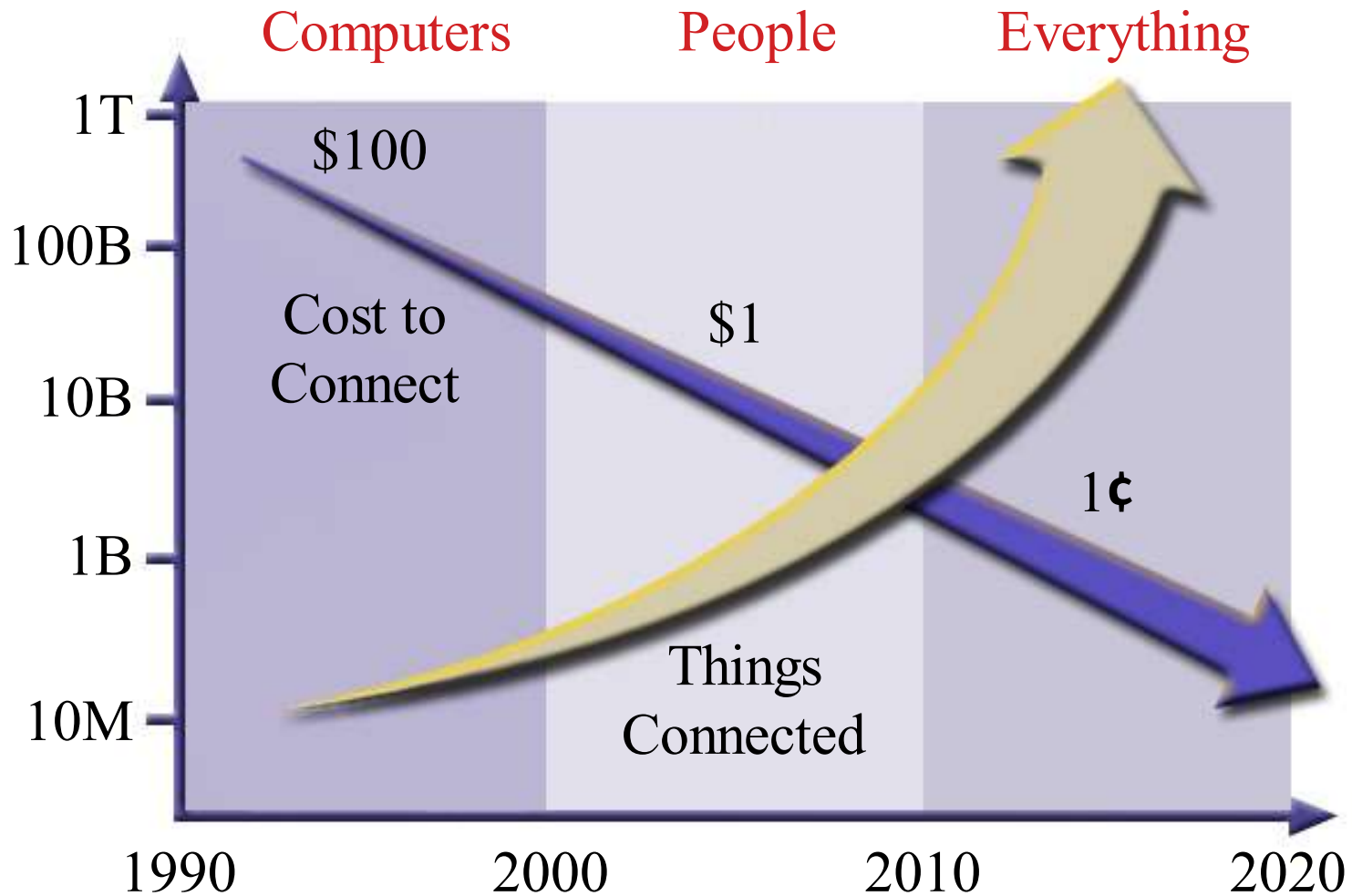


Sun's Vision

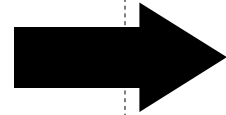
Everything and Everybody Connected to the Network



The Revolution



Networks will decompose the PC



Networked
displays



Services

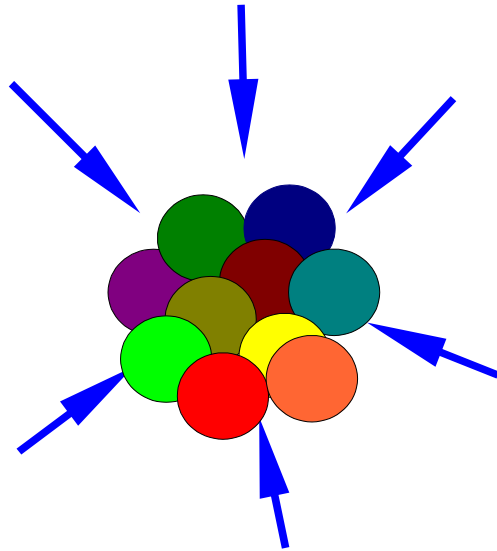


Internet

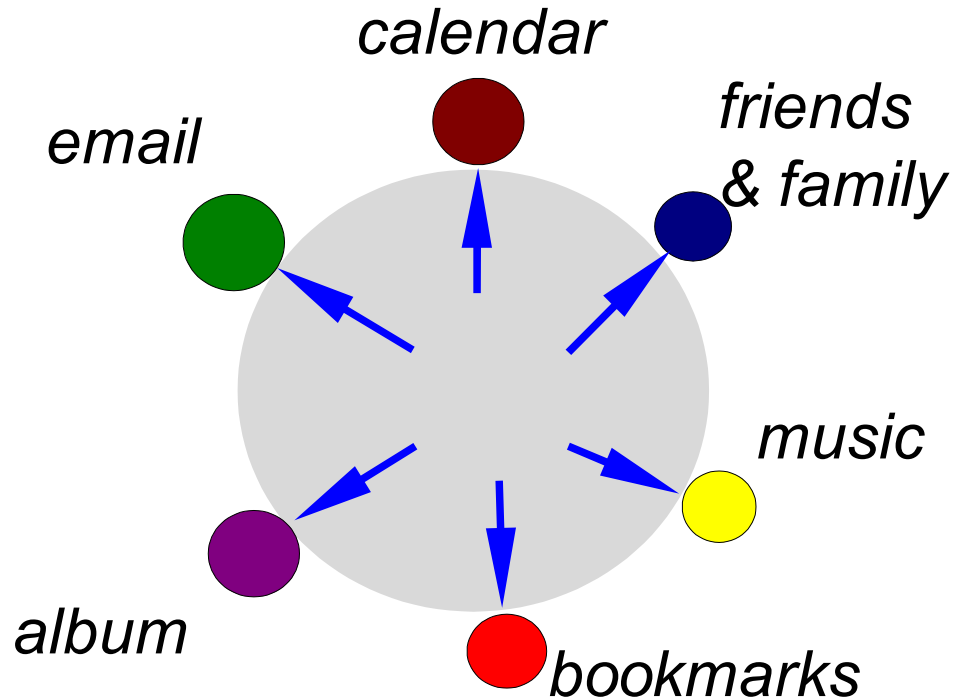
Storage



All about state



Personal Computer
State Attractor



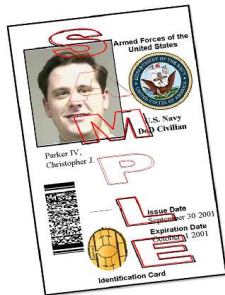
Personal Network
State Distributor

...The über-device?



Ultimate Mobility Vision

Secure Access Points Everywhere



Secure Javacard
Authentication



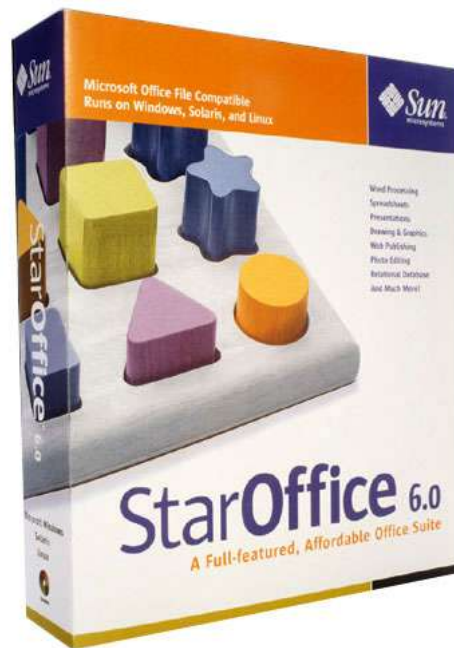
Sun today uses
20,000 Sun
Rays



Completely Stateless



Attack Cost: StarOffice



Full Featured, Word Processing, Spreadsheet, Presentation, Draw package

Fully compatible with your existing file formats (.doc, .xls, .ppt, ...)

Free for EDU market and many MoE's have signed distribution agreements

OpenOffice.org: *Open Source Version available*

Staroffice Cost at EMINENT

To

EMINENT 2003

Conference Delegates



Personal Internet Connection Services

&

Free StarOffice 7 for Schools Media Kit

from

Sun Microsystems



Sun's Value Add for EDU

Connect and Extend the Community of Learners

Educational Services delivered to Anyone, Anywhere, Anytime and on Anything

Minimum Technology Administration

Increase the Quality of Service

Lower the TCO

What Is a Web Service ?

- Web services are modular software components written in any language, but expressed through standard interfaces
 - XML wrapper around the service written in Java or other language
 - SOAP to communicate between services
 - WSDL to describe a service in a registry
 - UDDI to define the registry
- Applications can be built with any combination of web services located anywhere
- Services can be registered and discovered all across the intranet or Internet

What is a Personalized Education System

No matter where data and applications reside:

Securely Integrated and Personalized for...

Targeted Communities

- Communication & Collaboration
- Curriculum, Prof Dev, and Assessment
- Enterprise, Legacy, & Business Intelligence
- Internal and External Information Feeds
- Business Process Automation



Gateway to resources and applications



Administrators

Teachers

Students

Parents

What Your World Can Look Like -- Roles

Administrators



Make better informed decisions by viewing integrated performance reports, approve requests, collaborate with constituents.

Teachers



Access a broad selection of content and curriculum tools aggregated via single sign on, view student performance data, collaborate with students and parents.

Students

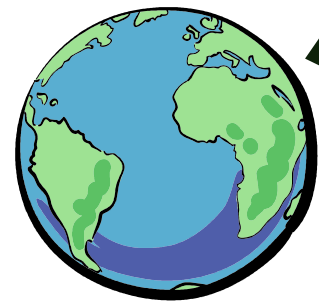


Enjoy 24/7 access to individualized learning materials, and work in progress, collaborate with peers, manage schedule.

Parents



View child performance, communicate with teachers, stay informed.



Implementing Webservices

The need for Identity Management

- Online Pupil/Teachers/Parents services via Portal
 - Single Sign-on
- Administrative System
 - Privacy and Data protection
- Security Management
- Digital Libraries
 - Intellectual Property Management
- E-Learning
 - Individualised learning / Assessments

Building Blocks of Network Identity Solution

- Access Management
 - Authentication, Authorization and single sign-on
- Directory Management
 - Central repository
- Identity Administration
 - Central, role based and policy based administration
- Provisioning, Self Administration

What Has to Be Identified?

- Persons (real people) in their roles
- Legal entities (companies, agencies, corporations, . . .)
- Things (air quality monitoring sensor, traffic counter, . . .)
- RFID tags; DRM
- Software services, agents, . . .

A Network of Things

Auto ID – RFID Tags



Note: By 2005 WallMart will only accept merchandise with RFID tags attached!

Architecture for Trust Management

Definitions

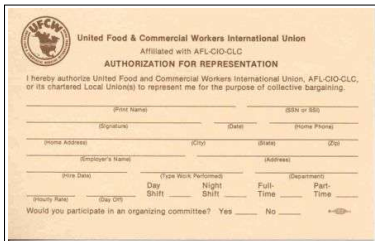
Identity Management

Policy



A combination of business and technology **practices** which define *how* a relationship is conducted and **services are performed**

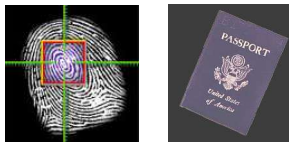
Authorization



A set of **rules** governing decisions about *what* the user can do: access to information, services or resources

Security Management

Authentication



Assertion of validity of a set of credentials. Credentials express a person's identity. "A Yes/No answer"

Identity



Basic set of information that creates a **"unique" entity** (a name with a corresponding set of attributes)



Open, Interoperable Standards For Federated Network Identity

SPONSOR MEMBERS include



■ PRESS RELEASES

July 09, 2003

Report Finds Liberty Alliance Standard Helps Financial Institutions Extend Trusted Relationships and Enable New Online Businesses

July 08, 2003

Liberty Alliance Releases Business Requirements And Guidelines for Wide Scale Identity Federation

April 15, 2003

Liberty Alliance Releases New Specifications, Privacy and Security Guidelines to Drive Development of Identity-Based Web Services

April 15, 2003

Liberty Alliance Hosts First Public Event Showcasing Array of Liberty-Enabled Products and Services Working Together

April 11, 2003

Liberty Alliance Contributes Phase 1 Network Identity Specifications to OASIS for Consideration in SAML 2.0

■ RECENT NEWS

May 6, 2003

Building Trust on the Internet; The Liberty Alliance Project aims at a convenient, secure and private networked world through standards cooperation.

Line 56

"We are excited to see how well the Liberty Alliance position has developed within the global Identity Management arena. Cavio, being the first member of the Liberty Alliance to successfully combine biometric authentication of individuals within the specification, is convinced that the Liberty Alliance Project will form an integral part of the next generation of e-business tools aimed at satisfying both the business need to exchange information and the individual's need to protect privacy."

- Paul Mann,
President & CEO

[▶ JOIN LIBERTY](#)

■ BUSINESS & POLICY

White Papers

[Business Benefits of Federated Identity White Paper \(PDF\)](#)

[Federated Network Identity Architecture White Paper \(PDF\)](#)

[Liberty and 3rd Party Identity Systems White Paper \(PDF\)](#)

[HP Federated Identity White Paper \(PDF\)](#)

Presentations

[For replay: HP InventOnline webinar on Federated Identity](#)

Other Resources

[Browse a complete listing of Liberty Enabled Products](#)

■ TECHNOLOGY

Phase 2 Draft Specifications

UPDATE: New Draft Specifications Posted - 08/08/2003

[ID-Federation Framework](#)
[ID-Web Services Framework](#)
[ID-Personal Profile](#)
[Glossary](#)

[View the complete listing of Phase 2 Specs](#)

Phase 1 Specifications

[View the complete Phase 1 Specification Suite](#)

[日本語](#)

Why is Sun Doing Open Source?

- We believe in shared innovation
- We believe in the customer and partner benefits of Open Source
- We believe in the increased quality and security of Open Source software
- We believe in Open Source beyond platforms and utilities
- Open Source and Open Systems



Open Source for Open Minds

Open Public Interfaces = Choice + Value

Defining Standards

Reference

Implementations

Driving and Supporting Standards Bodies

Solaris X internationalization technology

The WBEMsource Initiative

NFS v4

THE *Open* GROUP

SPARC
International, Inc.

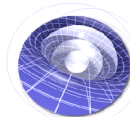
Project **JXTA**



The **Apache** Software Foundation
<http://www.apache.org/>



Open Source Implementations



GridEngine



GNOME.org



Mozilla.org

Li18nux.org



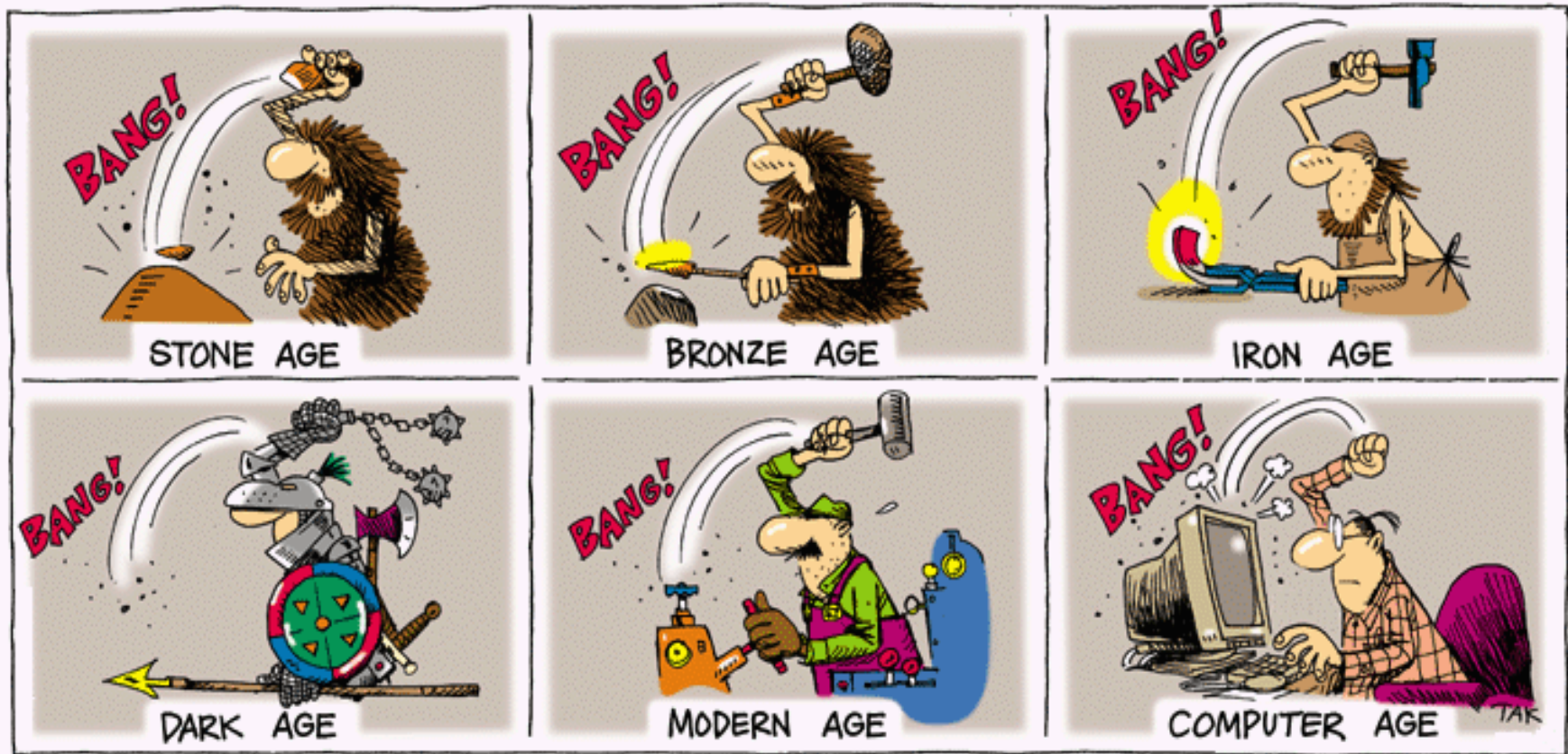
Why Open Source/ Open Standards are Important for Schools

- Possibility of customising applications for local needs
- Enable the architecture to be “Future Proof”
- Interoperability guaranteed
- Give the power back to educators to choose best of breed applications
- Lower Software Cost

Summary: Why Sun!

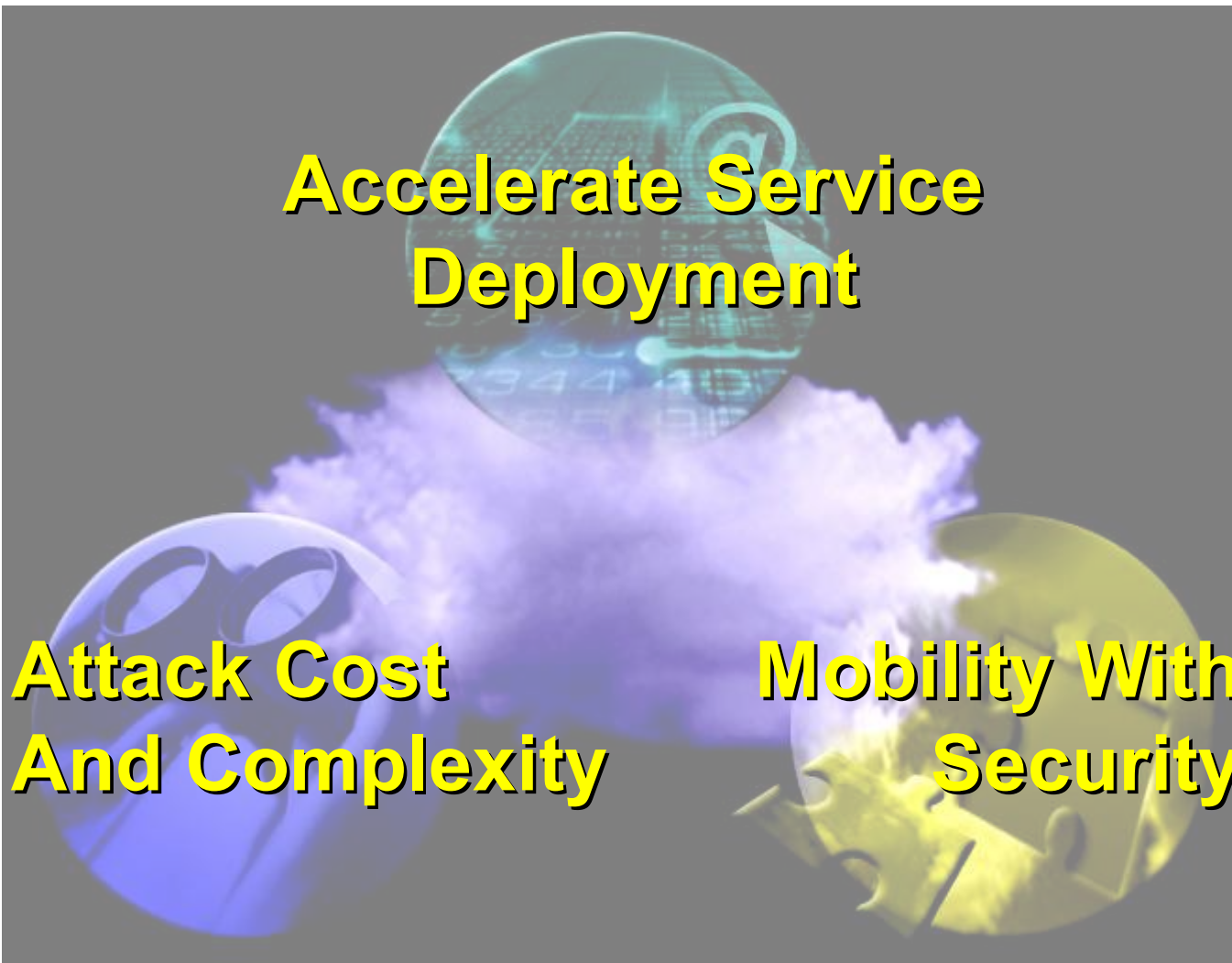
- End-to-End Network Architecture
- Open and Integrable
- Partnership
- Specific K12 Programs
- Extensive International track record

Nothing Can Stop Innovation





In Conclusion: Sun's 3 Core Strategies



**Accelerate Service
Deployment**

**Attack Cost
And Complexity**

**Mobility With
Security**



Thank You

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