

Open Source in K12

Where is the tipping point?

United States Open
e-Learning
Consortium



What % of the total global web-server market is open source (Apache)?

A.10%

B.25%

C.50%

D.75%

What % of the total global server OS market is open source (Linux)?

A.1%

B.10%

C.20%

D.40%

What % of the total global database market is open source (MySQL)?

A.1%

B.10%

C.20%

D.40%

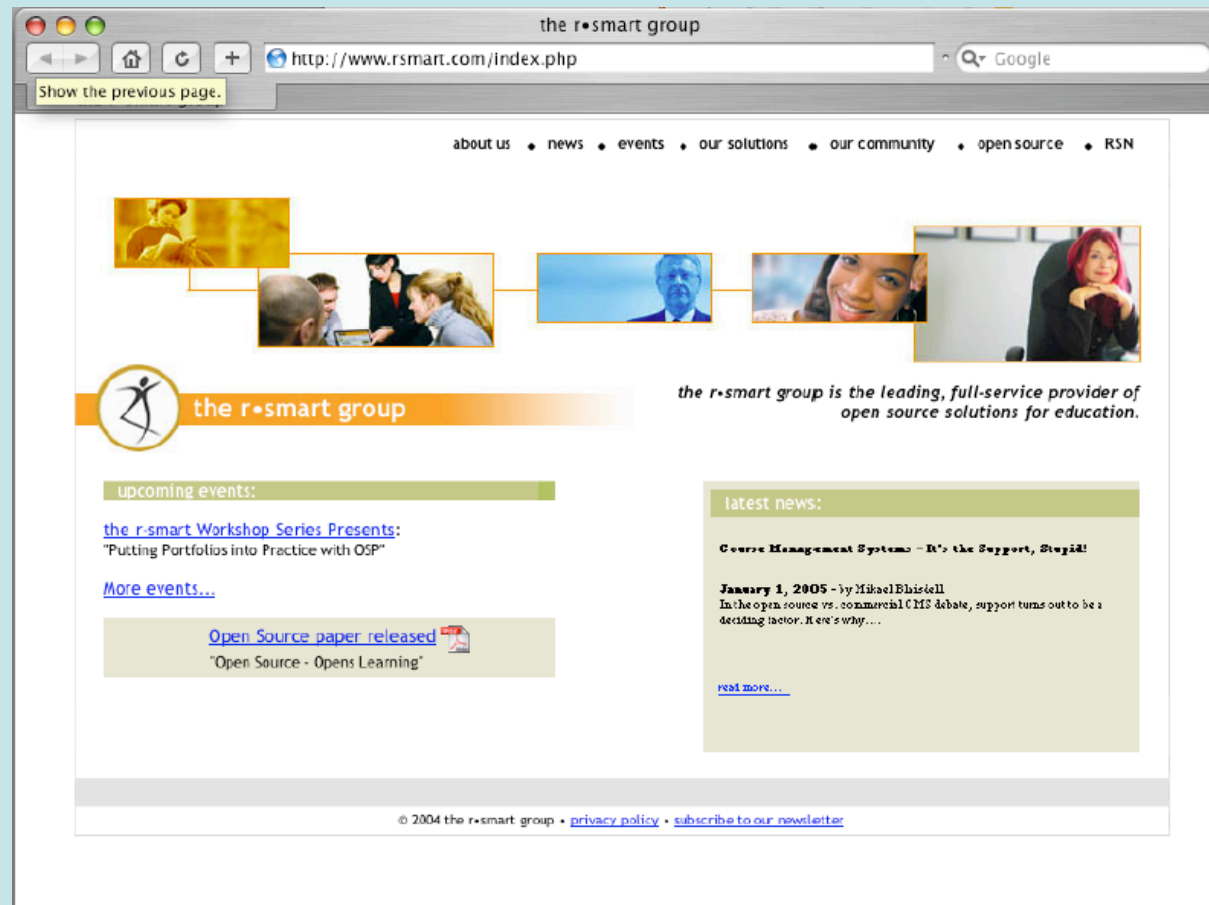
What % of the total global e-mail server market is open source (SendMail)?

A.1%

B.10%

C.20%

D.30%



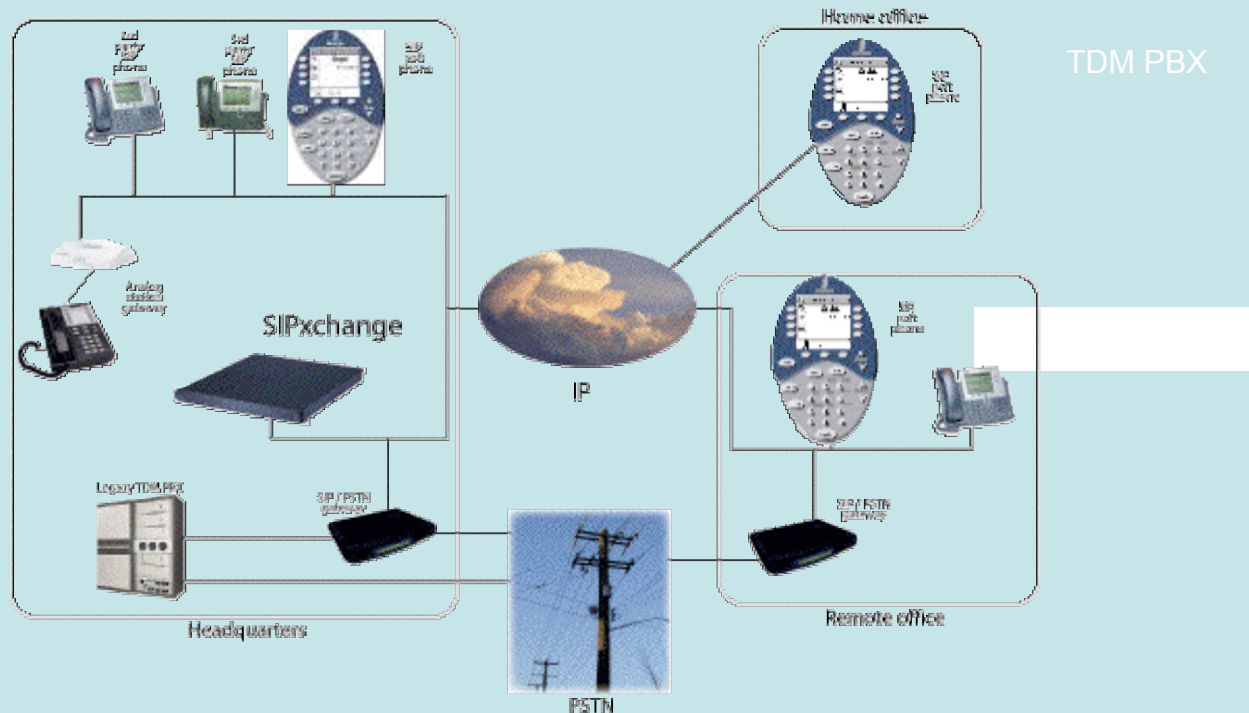
Greg Nadeau and Alex Jackl

Open Source in K12

Where is the tipping point?

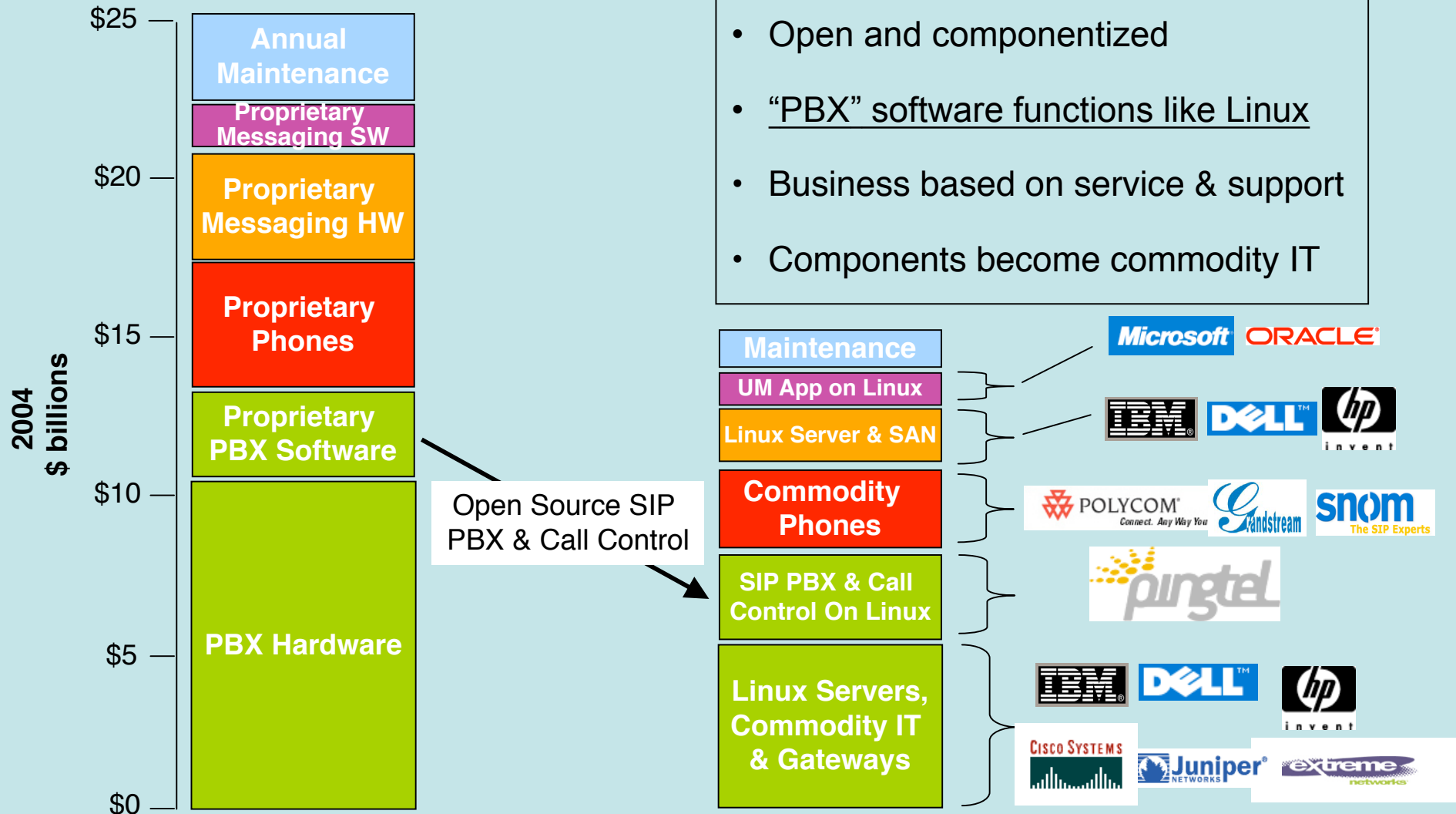
“Open Source + Open Standards are transforming the \$25b telephony market.”

SIPxchange
Software



Neil Segall, Pingtel
A Case Study: Open Source and Telephony

Open Source SIP Software Transforms Voice Into a Commoditized IT Application



Educational Content

Education Applications

Directory & Security

Hardware & Network Infrastructure

**Optimized US k12
Enterprise Architecture**



GOCC

Government Open Code Collaborative

A A A

Search

[home](#)

[latest software](#)

[gocc members](#)

[documentation](#)

[articles](#)

you are not logged in [log in](#)

you are here: [home](#)

navigation

- [Home](#)
- [Documents](#)
- [Member Entities](#)
- [Software](#)

log in

Name

Password

[Log in](#)

[Forgot your password?](#)

Welcome to the Government Open Code Collaborative Repository



The Government Open Code Collaborative is a voluntary collaboration between public sector entities and non-profit academic institutions created for the purpose of encouraging the sharing, at no cost, of computer code developed for and by government entities where the redistribution of this code is allowed. Please consult [the documentation](#) for more information.

news

[News Items From Our Members](#)
2004-07-07

[June 30, 2004 - The Government Open Code Collaborative is Launched](#)
2004-06-30

[More...](#)

Use of this site implies acceptance of the [GOCC Terms of Use](#)

Copyright © 2004 Government Open Code Collaborative
Plone and its visual design is Copyright © 2000-2004 by [Alexander Limi](#), [Alan Runyan](#), [Vidar Andersen](#).

Pat McCormack, GOCC

The Government Open Code Collaborative

- What is it?
- Why do we need it?
- Who are the the members?

Who is the GOCC?

The current members of the GOCC include 10 state entities, 4 local government entities and 1 academic entity:

State:

- The Commonwealth of **Massachusetts** Information Technology Division (Peter Quinn, CIO)
- The **Rhode Island** Office of the Secretary of State (Jim Willis, Director of e-Government and Information Technology)
- The **Pennsylvania** Office of Information Technology (Jem Pagan, CIO)
- The **Utah** Governor's Office, CIO Section (Val Oveson, CIO)
- The **Kansas** Secretary of State Office (Kathy Sachs, Deputy Assistant Secretary of State)
- The **Kansas** Treasurer's Office (Curtis Bears, Senior Applications Developer/Webmaster)
- The **Missouri** Secretary of State Office (Trish Vincent, Deputy Secretary of State for Business Services)

Who is the GOCC? (con)

State (con):

- The **West Virginia** Auditor's Office (Glen Gainer, State Auditor)
- The **West Virginia** Treasurer's Office (John Perdue, Treasurer)
- The **Wisconsin** Department of Administration (William Nash, Deputy Director)

Local:

- The City of **Gloucester, MA** (Mike Wells, CIO)
- The City of **Worcester, MA** (Eileen Cazaropoul, Deputy CIO)
- The City of **Newport News, VA** (Andy Stein, Director IT)
- The **Albany County** Airport Authority, **NY** (J. Dwight Hadley, CFO)

Academic:

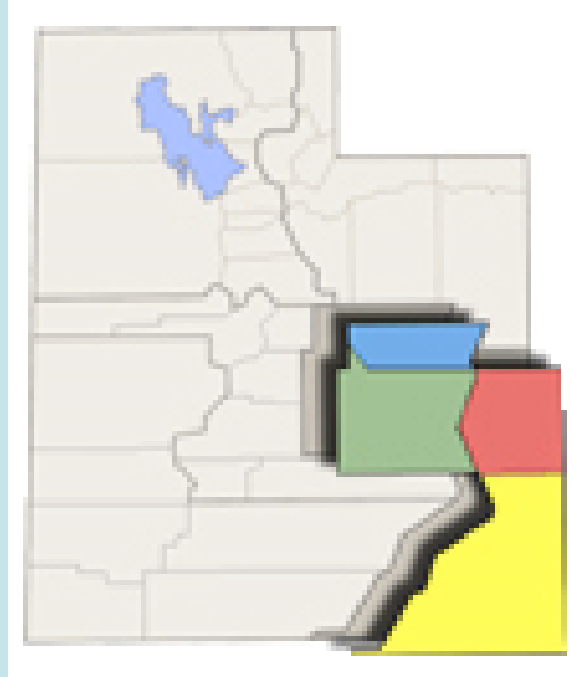
The **School of Government at the University of North Carolina**, Chapel Hill, NC
(Thomas Thornburg, Senior Associate Dean)

Who is the GOCC? (con)

Leadership Team:

- Chair – Peter Quinn, MA
- Municipality Representative – Mike Wells, Gloucester, MA
- Technical Lead – Jim Willis, RI
- Policy Lead – Patrick McCormick, Harvard University

In addition, there are 84 individuals participating as Observers. Observers are people belonging to a government entity or private non-profit academic institution that has not yet signed the Operating Agreement, or a representative of a non-profit association of public entities.



Southeast Educational Service Center
MyEDesk and UTIPS

Cody Spendlove & Coy Ison



iMatrix Member

Media Server

SURWEB allows people to create multimedia presentations in minutes using images, sounds & movies provided by SURWEB or other digital sources.

SURWEB was established in 1995 in Utah by the Southeastern Education Service Center ([SESC](#)) with a Technology Innovation Challenge Grant from the U.S. Department of Education ([USD&ED](#)).

- **Collection:**
[Winter and Skiing](#)
- **Media Show:**
[Migratory Birds of the Wetlands](#)
- **Testing:**
[Computer Games](#)
- **Learning Segment:**
[September 11th, 2001 - United States of America](#)
- **Screen Savers and Wallpaper**
[Created using SURWEB images](#)
- **Utah Trivia**
[Play Utah Trivia](#)

www.surweb.org

(1995-2000)

www.iMatrix.org

(1998-2002)



The screenshot shows the iMatrix.org homepage. At the top, a banner reads "welcome to iMatrix.org" with a large 'M' logo. Below the banner is a navigation bar with buttons: "Member List", "Key-Docs", "Software Download", "Register", and "Contact Us". The main content area features the "MATRIX Mission Statement" and a link to "View Full Members List". Below this is a map of the United States with state abbreviations, color-coded by region: West (blue), Midwest (green), South (red), and Northeast (brown).

MATRIX Mission Statement

The ongoing mission of the Internet MATRIX Consortium is to encourage localized collections of imagery and text depicting regionally focused resources, which can be used to develop media presentations which teach concepts relevant to a standards based curriculum.

[View Full Members List](#)



The screenshot shows the i2iA Media Server website. It has a dark blue header with the "i2iA Media Server" logo and navigation links: "Searches", "Tutorials", "Outside Resources", "Contact Us", and "Key-Docs". Below the header is a grid of four categories: "Collections", "Media Shows", "Testing", and "Learning Segments". Each category has a thumbnail image and a "View Create Edit" button. Below the grid is a section for "iMatrix Member" with a paragraph about the M.E.D.I.A. Server and its development by SURWEB and other consortium members.

i2iA Media Server

Searches Tutorials Outside Resources Contact Us Key-Docs

Collections **Media Shows** **Testing** **Learning Segments**

View Create Edit View Create Edit View Create Edit View Create Edit

iMatrix Member

The M.E.D.I.A. Server allows you to create cool multimedia presentations right on the web, by using our archive of images, sounds & movies.

This site made possible through technology developed by the [Southeastern Education Service Center \(SESC\)](#) with a Technology Innovation Challenge Grant from the [U.S. Department of Education \(USDoED\)](#).

This M.E.D.I.A. Server was developed in collaboration with [SURWEB](#) and other [iMatrix](#) consortium members.



The screenshot shows the SOARWEB website. It has a light blue header with the "SOARWEB" logo and navigation links: "Searches", "Tutorials", "Outside Resources", "Contact Us", and "Key-Docs". Below the header is a section for "More Than 37,000 Educational Images". Below this is a grid of four categories: "Collections", "Media Shows", "Testing", and "Learning Segments". Each category has a thumbnail image and a "View Create Edit" button. Below the grid is a section for "iMatrix Member" with a paragraph about SOARWEB and its development by SURWEB and other consortium members.

SOARWEB

Searches Tutorials Outside Resources Contact Us Key-Docs

More Than 37,000 Educational Images

Collections **Media Shows** **Testing** **Learning Segments**

View Create Edit View Create Edit View Create Edit View Create Edit

iMatrix Member Building Educational Tools Through Technology

SOARWEB (State of Ohio Alliance Resource Web) is a place where you can create multimedia presentations in minutes using images, sounds, and movies available in **SOARWEB** and from other digital sources.

What's New

- Collection:
- Media Show:
- Testing:
- Learning Segment:

SOARWEB multimedia software was originally developed by SURWEB in Utah by the [Southeastern Education Service Center \(SESC\)](#) with a Technology Innovation Challenge Grant from the [U.S. Department of Education \(USDoED\)](#).

www.myedesk.org

(2001-2003)

MyEDesk.org

Contact Us Tutorial

Welcome to
MyEDesk.org

Welcome to MyEDesk.org. The Future of Educational Technology!

Username:

Password:

Utah GIS 's Files

- + GIS Web Resources
- Handouts and Materials
 - PDF's
 - PowerPoints (PPT's)
 - Publisher Docs
 - Word Docs
 - WordPerfect Docs
- + Lessons
- My Buddies


Word Docs 549.5 kb

☒ Select All

View: List Sort By: Type

<input type="checkbox"/>	Agenda_2day_UEN.doc	11/12/2003	42 kb
<input type="checkbox"/>	arcview_install_steps.doc	11/12/2003	137 kb
<input type="checkbox"/>	checklist.doc	11/12/2003	20.5 kb
<input type="checkbox"/>	gis_kwl.doc	1/11/2005	25 kb
<input type="checkbox"/>	Lesson_plan.doc	11/12/2003	99 kb
<input type="checkbox"/>	Skull_Valley_Issue.doc	11/12/2003	125.5 kb
<input type="checkbox"/>	Teacher_Credit_Request_Form.doc	11/12/2003	32 kb
<input type="checkbox"/>	UEN_Workshop_GIS_credit_app.doc	11/12/2003	68.5 kb

EDesk Teacher Portals



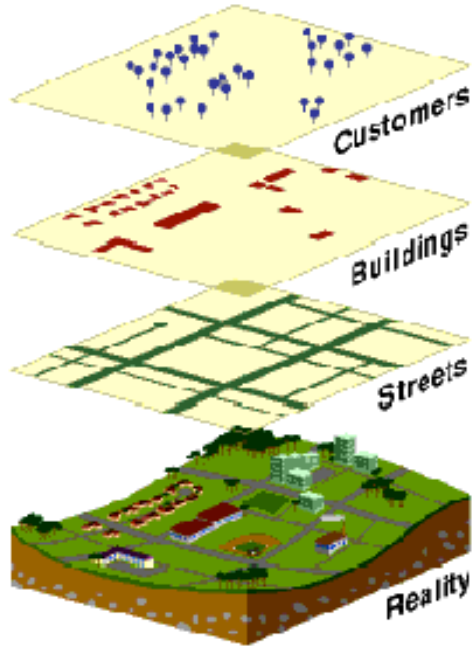
Utah GIS 's Page

- GIS Web Resources
- Handouts and Materials**
 - PDF's
 - PowerPoints (PPT's)
 - Publisher Docs
 - Word Docs
 - WordPerfect Docs
- Lessons

Utah GIS

Utah GIS Resources
January 18, 2005

[Utah GIS Coalition Education Data Center.](#)



My Quick Links

- AGRC Automated Geographic Reference Center
- ARC Lessons from ESRI
- NASA's J-Track 3-D
- National Atlas
- National Geographic - Map Machine
- TerraFly
- TerraServer
- Utah GIS Coalition Education Data Center

My Discussion Thread

www.utips.org

(2003-2005)



Cody's Files

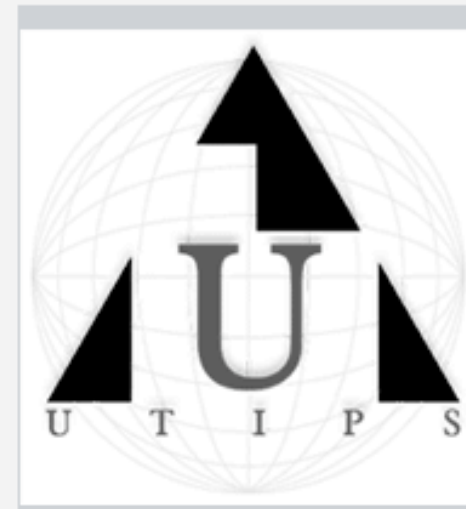
- math
- UDOT
 - Power Point
 - Tests
 - UDOT Safty test
 - UDOT Motor Carrier
 - Study Manuals
- biology

Cody Spendlove

SESC

Price, Utah

cody@surweb.org



My Tests

- UDOT Motor Carrier
- UDOT Safty test
- Demo for Clair
- Demo_II

My Links

Individuals

UTIPS
UTIPS Test Item Pool Server

Folder | Test | Question | Media | Reports | Profile | Logout

This Test All Tests

USOE
UTIPS Training Materials
+ USOE
+ Cforum
+ Daves Utips Training
ITC Practice
AZ 8th grade tech literacy
Basic Tech Skills
Alice's Adventures
+ **test test**
Mrs. Jones'C

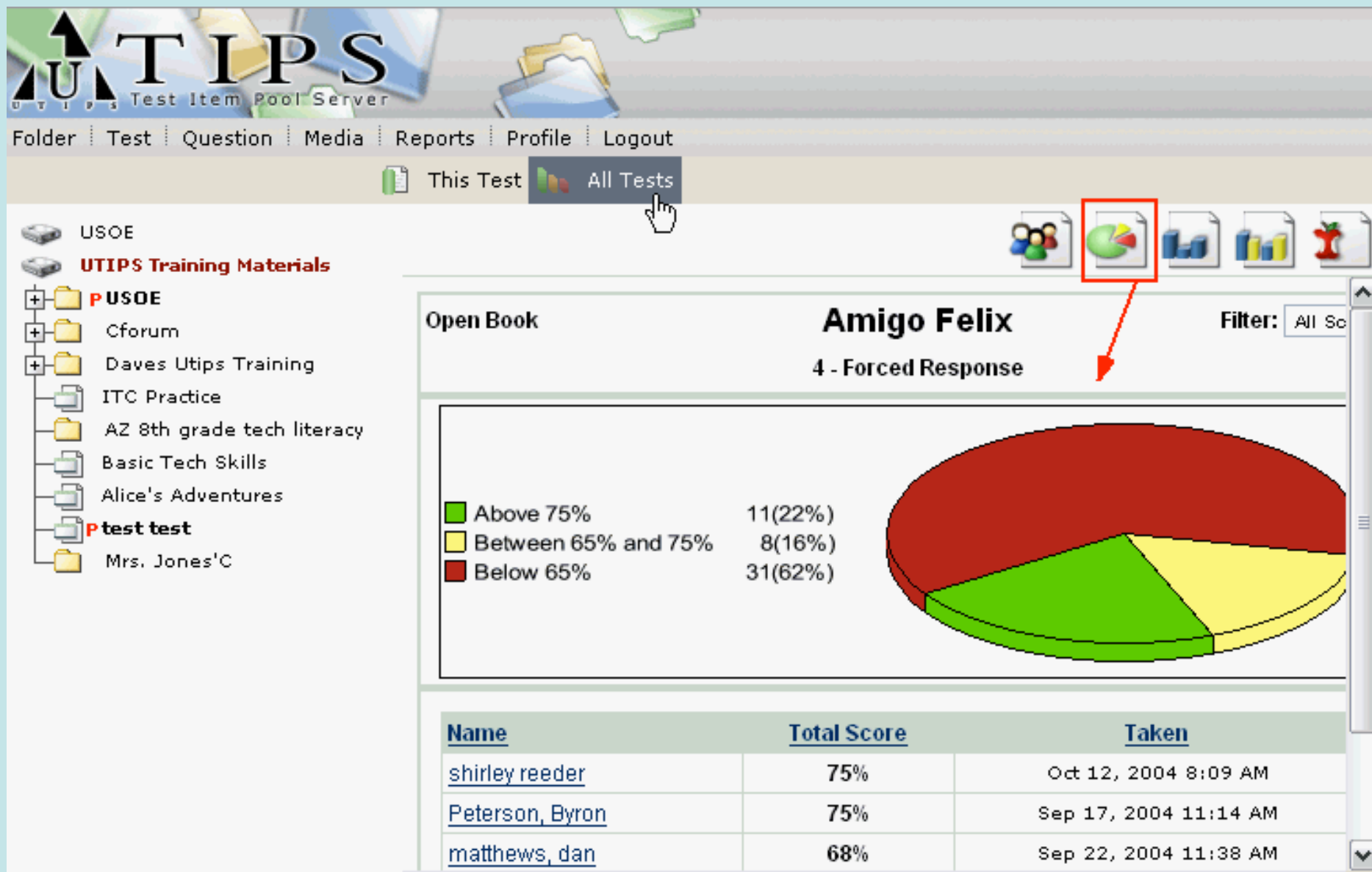
Amigo Felix
4 - Forced Response

Filter: All So

☐ Select All [Export](#)

<u>Name</u>	<u>Forced Response</u>	<u>Total Score</u>	<u>Taken</u>
<input type="checkbox"/> kristine.lambert	100% (40/40)	100%	Oct 11, 2004 2:59 PM
<input type="checkbox"/> Balderas, Juan	100% (40/40)	100%	Oct 7, 2004 11:46 AM
<input type="checkbox"/> McFarlane, Doug	100% (40/40)	100%	Oct 7, 2004 11:46 AM
<input type="checkbox"/> [Name Not Given]	92% (37/40)	93%	Oct 13, 2004 9:39 AM
<input type="checkbox"/> amigo	87% (35/40)	88%	Sep 21, 2004 11:11 AM
<input type="checkbox"/> jan.givens	87% (35/40)	88%	Oct 11, 2004 2:58 PM
<input type="checkbox"/> [Name Not Given]	87% (35/40)	88%	Oct 11, 2004 12:59 PM

Cut Score



Standard : Objective

UTIPS
UTIPS Test Item Pool Server

Folder | Test | Question | Media | Reports | Profile | Logout

This Test All Tests

USOE
UTIPS Training Materials

- + USOE
- + Cforum
- + Daves Utips Training
- ITC Practice
- AZ 8th grade tech literacy
- Basic Tech Skills
- Alice's Adventures
- + test test
- Mrs. Jones'C

Open Book **New Question Types sample** Filter: All So

6 - Forced Response | 1 - Short Answer | 1 - Matching | 1 - Essay | 1 - Performance B

Legend

- 100% - 80%
- 79% - 60%
- 59% - 40%
- 39% - 20%
- 19% - 0%

Name	S1	S2	S3	S4	S5	S6	S7	Attempts
Waite, Paul	○	●	○	●	○	○	○	25
victoria	○	○	○	●	○	○	○	7
Tom Ackerson	○	○	○	○	○	○	○	9
Thacker, Brandon	○	●	●	●	○	○	○	22
Spendlove, Cody	○	○	●	○	○	○	○	24
Smith, Dianne	○	●	●	●	○	○	○	14



CORE MANAGER

Online State Education Core Management Utility

Core | Groups | Settings | Logout

Add | Move | Delete

Standard I

Core

Applied Mathematics I

Applied Mathematics II

Biology

Standard I

Objective 1

Objective 2

Objective 3

Standard II

Standard III

Standard IV

Standard V

Chemistry

Earth Systems Science

Eighth Grade Integrated Science

Elementary Algebra

Fifth Grade Language Arts

Fifth Grade Mathematics

Fifth Grade Science

First Grade Language Arts

Fourth Grade Language Arts

Fourth Grade Mathematics

ID: 663

Title: Standard I

Description:

Students will understand that living organisms interact with one another and their environment.

Status: Development

Code: SC: BIO: 1

Allow A



Fourth Grade Science

The theme for the fourth grade Science Core curriculum is Utah natural history. Students will learn about Utah environments including: weather, water cycle, rocks, fossils, soils, plants and animals. Understanding the concepts of cycles is an essential component of science literacy and is introduced at this grade level. Emphasis should be placed on skills to classify many things. Students should come to value and use science as a process of obtaining knowledge based on observable evidence, and their curiosity should be encouraged and sustained as they develop the abilities associated with inquiry in science.

Standard I

Students will understand that water changes state as it moves through the water cycle.

Objective 1

Describe the relationship between heat energy, evaporation and condensation of water on Earth.

- Identify the relative amount and kind of water found in various locations on Earth (e.g., oceans have most of the water, glaciers and snowfields contain most fresh water).
- Identify the sun as the source of energy that evaporates water from the surface of Earth.
- Compare the processes of evaporation and condensation of water.
- Investigate and record temperature data to show the effects of heat energy on changing the states of water.

Objective 2

Describe the water cycle.

- Locate examples of evaporation and condensation in the water cycle (e.g., water

UTIPS

- **Stand Alone Account System**
- *Backend Standards : Objectives engine*
- Uses “Open Source code” – *Phoenix code, SESC code, etc...*
- **Postgress SQL / Cold Fusion**
- **Scantron agreement...**

OPEN Source Collaboration

Increasingly more attractive solution to lower costs of K-12 entities
as they strive to meet the Federal requirements of
No Child Left Behind (NCLB)

What is .LRN?

- An Open Source Learning Management System used at 200 universities worldwide, including MIT Sloan
- A development platform for custom educational and collaborative module
- A configuration of a set of packages of OpenACS, including content management and ecommerce
- A Consortium of universities and organizations dedicated to working together to improve educational technology
- An OpenSource community of developers and users

Tracy Adams

.LRN

Poll

- How many of you have experienced lock in from a technology vendor?
 - A. Yes -
 - B. No -
- In other words – how many of you have been 100% reliant on a vendor and vendor whims.

Quick Demo

- <http://sloanspace.mit.edu>
- You can see a list of features at <http://dotlrn.org/features/>

Why .LRN is selected

MIT Sloan School of Management

When Sloan management was initially looking for collaborative education technology, their primary concern was the breadth of their requirements and the speed with which these requirements would evolve. Going with a commercial vendor or undertaking 100% custom development seemed prohibitively risky, especially given the universal reality of limited resources. According to Sloan CIO Alfred Essa, choosing a well-supported, open source solution mitigated these risks. "Open source provides not only the source code, but visibility into the development process and path," says Essa. ".LRN's global community of developers offers support for existing .LRN users, as well as a proven, secure system for delivering enhancements back into the code base."

Al Essa – CIO Sloan

Why .LRN (CoachVille)

We are a virtual company with 60,000 users, so our web technology is the backbone of our business. Before we switched to .LRN, we were at the whim of our vendors. The needs of our site outgrew the needs of our first vendor – they simply couldn't provide the scalability and functionality we needed. Our second vendor had staffing problems which led to low reliability. In both of these situations, our company was left helpless in finding a solution, as we were extremely reliant on the other company..Even if these vendors could provide the technology we needed, we were still at the mercy of their fees. We were charged \$50 simply to change an email forwarding address. We knew this was unreasonable, but had no other choice as we were 100% reliant.

With .LRN and the .LRN consortium, we have a technology that has been used at institutions that are bigger than we are. With so many participants and partners, we regularly benefit from the work and experience from others in the community. Our vendor, Solution Grove, is the leader in the community.They have educated us on the best packages for our needs and have developed the new functionality we've needed very efficiently and economically. It is also reassuring that there are dozens of other companies and consultants that could also be of service, should the need arrive. We have a great solution and no longer feel vulnerable and helpless to a specific vendor.

Dave Buck - CEO CoachVille (<http://www.coachville.com>)

.LRN Management

- Board of Directors
- Consortium
- OCT Technical Team (voted)
- eLane – 3 million Euro investment by the European Union into dissemination in Latin America

.LRN Community

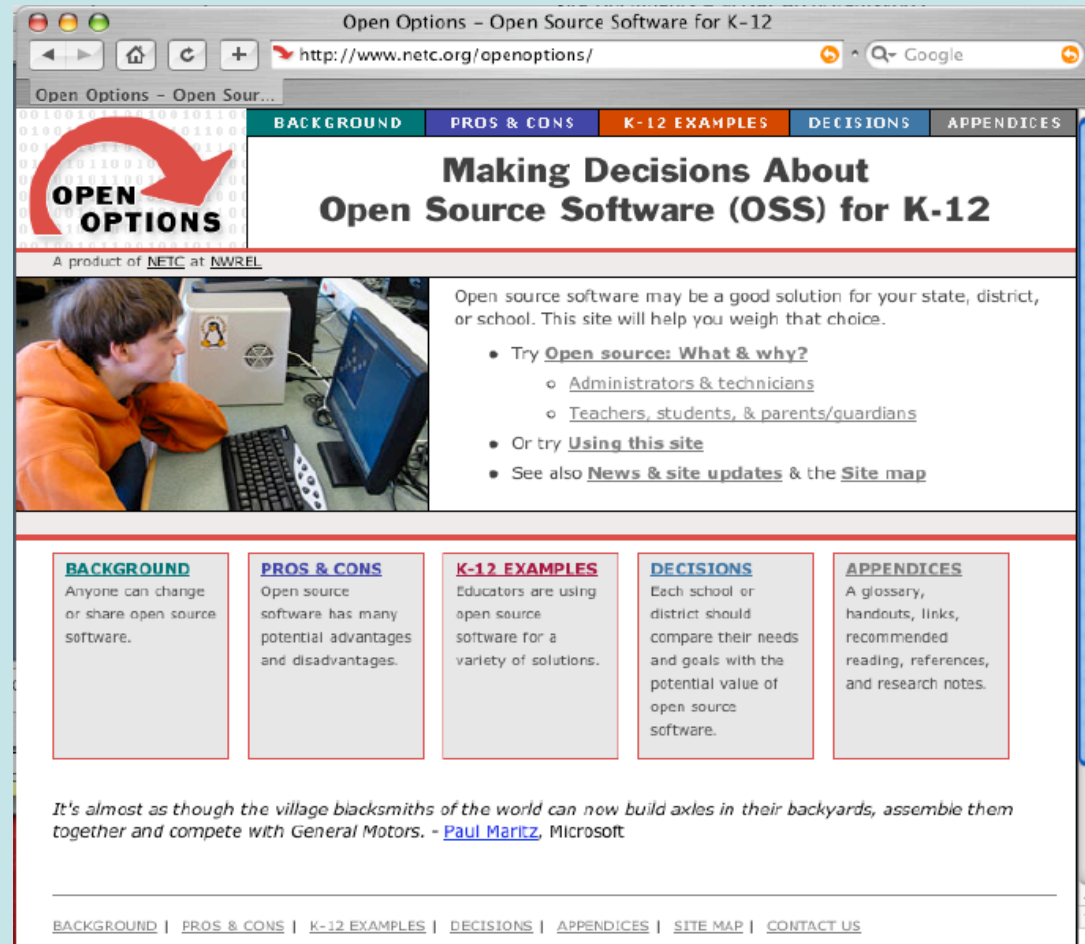
- OpenACS (openacs.org) is the base technology
- Like a cottage industry
 - Dozens of companies (hosting, development)
 - Interesting combination of sharing and competition

Other participants

- Greenpeace
- Harvard Kennedy School of Government
- University of Galileo
- Berkeley School of Music
- Brandeis University
- Creative Commons
- AIESEC
- Birzeit University
- University of Delhi
- University of Sydney
- American University of Bulgaria
- Fachhochschule Heilbronn
- Freie Universität Berlin
- Freie Universität Berlin
- Københavns Universitets
- Universidad Nacional de Educación a Distancia
- Universität Mannheim
- Universitat de Valencia
- St. Mary's College of Maryland
- University of Massachusetts
- Donahue Institute
- FLACSO (Faculdade Latino-americana de Ciências Sociais)
- ITESM (Tecnológico de Monterrey)
- Universidad Agraria de la Habana
- More at <http://www.dotlrn.org/partners/>

More Information

- Dotlrn.org
- Openacs.org
- Feel free to email or call me, Tracy Adams,
at teadams@alum.mit.edu (617 283 1798)



Seymour Hanfling

NWREL k12 Open Source Site

Panelists

Samuel DiGangi, Arizona State University

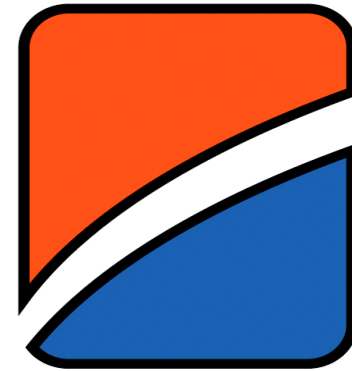
Mark Gura, former NYC

Bernard Percy, Converge

Larry Fruth, SIF

Ethan O'Rafferty, MySQL

United States Open
e-Learning
Consortium



www.usoec.org

Greg Nadeau
Director
gregnadeau@rcn.com
781-370-1017

Alex Jackl
Chief Technologist
ajackl@rcn.com
781-370-1043