

April 20, 2005

A New Model for Open Sharing

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- I. Vision
- II. Implementation
- III. Outcomes
- IV. What It Means

Vision — Institutional decision-making

- Fall 1999 — Faculty committee appointed
- Fall 2000 — “OpenCourseWare” concept recommended to MIT President Charles M. Vest
- April 2001 — MIT OCW announced in *The New York Times*

Vision — Institutional decision-making

“OpenCourseWare looks counterintuitive in a market-driven world. But it really is consistent with what I believe is the best about MIT. It is innovative. It expresses our belief in the way education can be advanced — by constantly widening access to information and by inspiring others to participate.”

— Charles M. Vest,
President Emeritus of MIT



Vision — Vision to reality

- June 2001 — Funding partnership with the William and Flora Hewlett Foundation, and the Andrew W. Mellon Foundation
- September 2002 — MIT OCW pilot site- 50 courses
- September 2003 — MIT OCW officially launches 500 courses
- April 2005 — 1,100 courses

Vision — What is MIT OCW?

- MIT OpenCourseWare IS NOT:*
- An MIT education
 - Intended to represent the interactive classroom environment
 - Degree granting

- MIT OpenCourseWare IS:*
- A Web-based publication of virtually all MIT course content
 - Open and available to the world
 - A permanent MIT activity

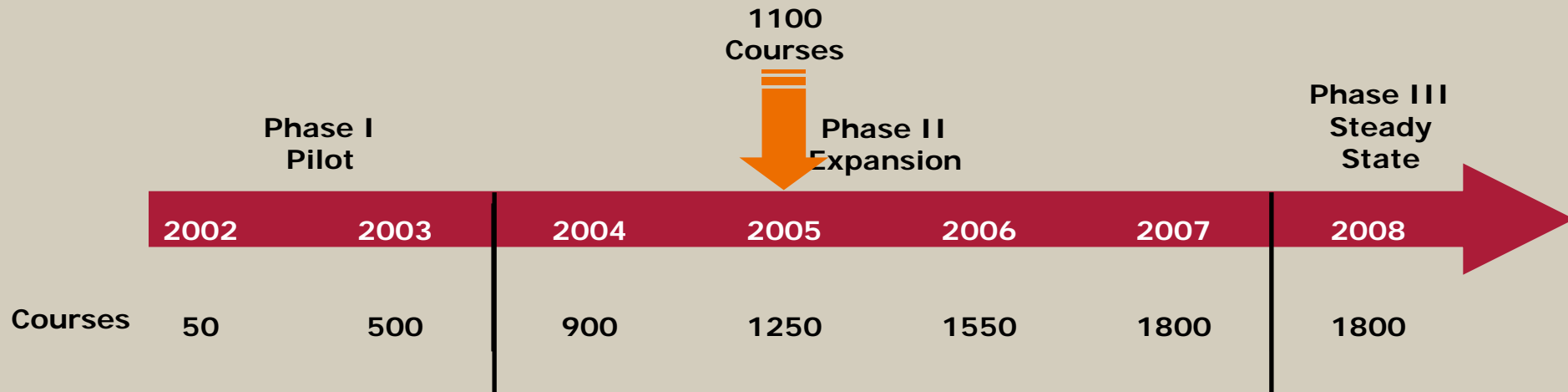
Vision — Why is MIT doing this?

- Furthers MIT's fundamental mission
- Embraces faculty values
 - Teaching
 - Sharing best practices with the greater community
 - Contributing to their discipline
- Counters the privatization of knowledge and champions the movement toward greater openness

Vision — Dual mission

- Provide free access to virtually all MIT course materials for educators and learners around the world
- Extend the reach and impact of MIT OCW and the “opencourseware” concept

Vision — Where we are



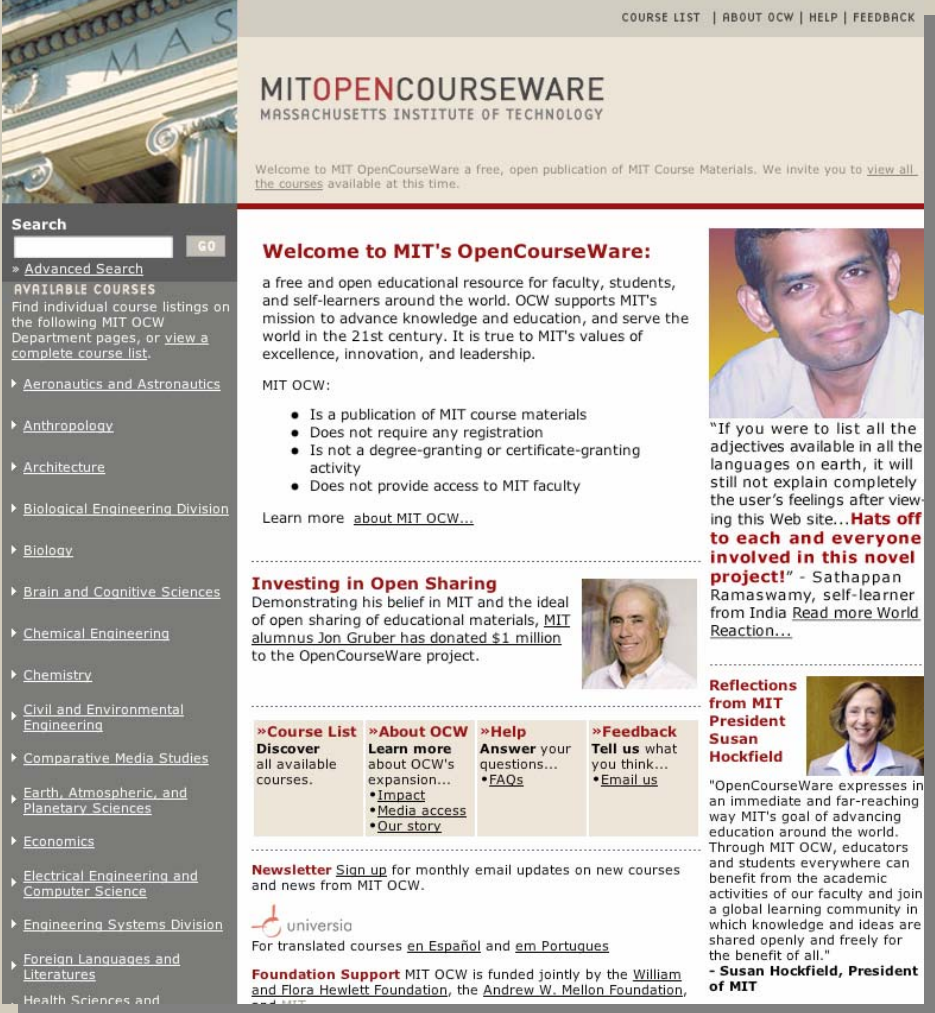


Implementation

Implementation — 1100 courses available

Site Highlights

- Syllabus
- Course Calendar
- Lecture Notes
- Exams
- Problem/Solution Sets
- Labs and Projects
- Video Lectures



The screenshot shows the MIT OpenCourseWare website. At the top right, there are navigation links: COURSE LIST | ABOUT OCW | HELP | FEEDBACK. The main header reads "MITOPENCOURSEWARE MASSACHUSETTS INSTITUTE OF TECHNOLOGY". Below this is a welcome message: "Welcome to MIT OpenCourseWare a free, open publication of MIT Course Materials. We invite you to [view all the courses](#) available at this time."

On the left side, there is a search bar and a sidebar menu. The sidebar menu lists various departments and disciplines, each with a right-pointing arrow: Aeronautics and Astronautics, Anthropology, Architecture, Biological Engineering Division, Biology, Brain and Cognitive Sciences, Chemical Engineering, Chemistry, Civil and Environmental Engineering, Comparative Media Studies, Earth, Atmospheric, and Planetary Sciences, Economics, Electrical Engineering and Computer Science, Engineering Systems Division, Foreign Languages and Literatures, and Health Sciences and... (partially visible).

The main content area features a "Welcome to MIT's OpenCourseWare:" section. It includes a portrait of Sathappan Ramaswamy and a quote: "If you were to list all the adjectives available in all the languages on earth, it will still not explain completely the user's feelings after viewing this Web site... **Hats off to each and everyone involved in this novel project!**" - Sathappan Ramaswamy, self-learner from India. Below the quote is a link to "Read more World Reaction...".

Below the welcome section, there is a "Welcome to MIT's OpenCourseWare:" section with a list of bullet points: "Is a publication of MIT course materials", "Does not require any registration", "Is not a degree-granting or certificate-granting activity", and "Does not provide access to MIT faculty". Below this is a link to "Learn more [about MIT OCW...](#)".

Next is the "Investing in Open Sharing" section, featuring a portrait of Jon Gruber and text: "Demonstrating his belief in MIT and the ideal of open sharing of educational materials, MIT alumnus Jon Gruber has donated \$1 million to the OpenCourseWare project."

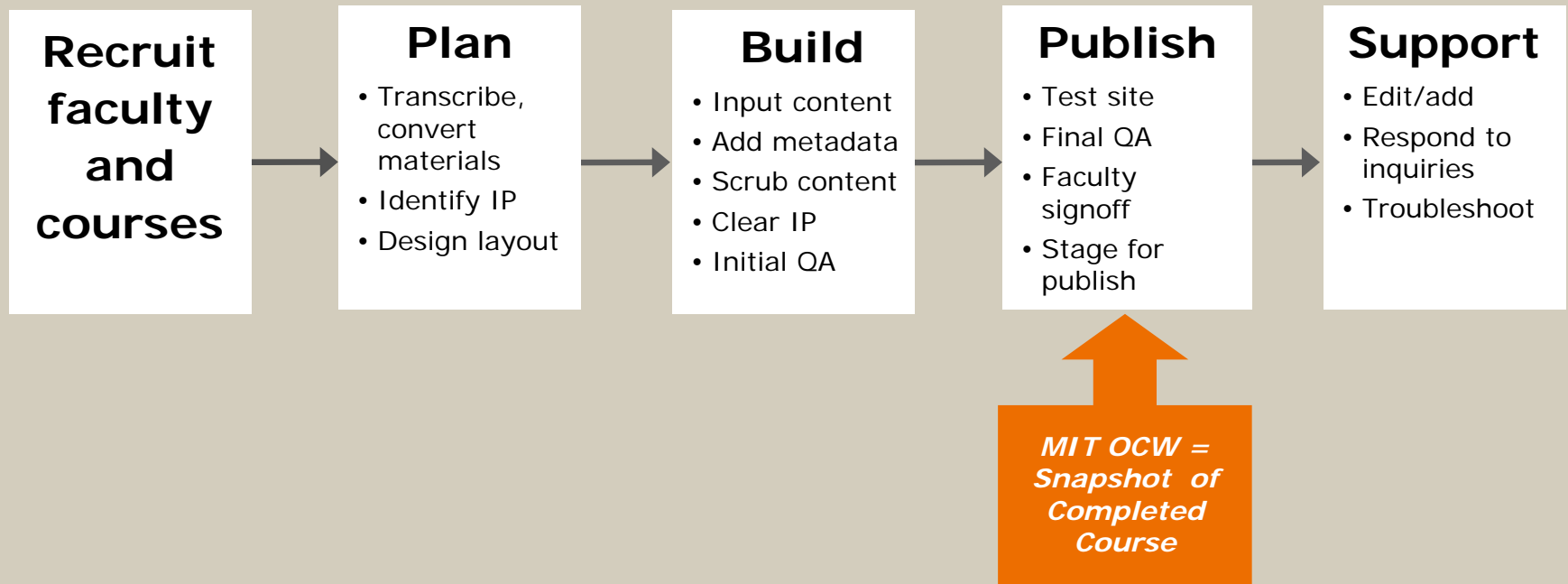
At the bottom of the main content area, there are four columns of links: "Course List" (all available courses), "About OCW" (Learn more about OCW's expansion... with sub-links for Impact, Media access, and Our story), "Help" (Answer your questions... with sub-links for FAQs), and "Feedback" (Tell us what you think... with sub-link for Email us).

Below these links is the "Newsletter" section with a "Sign up" link for monthly email updates. There is also a "universio" logo and text: "For translated courses [en Español](#) and [em Portugues](#)".

The footer of the main content area includes the "Foundation Support" section, stating that MIT OCW is funded jointly by the William and Flora Hewlett Foundation, the Andrew W. Mellon Foundation, and...

Implementation — Publication process

Managing a course through the MIT OCW process



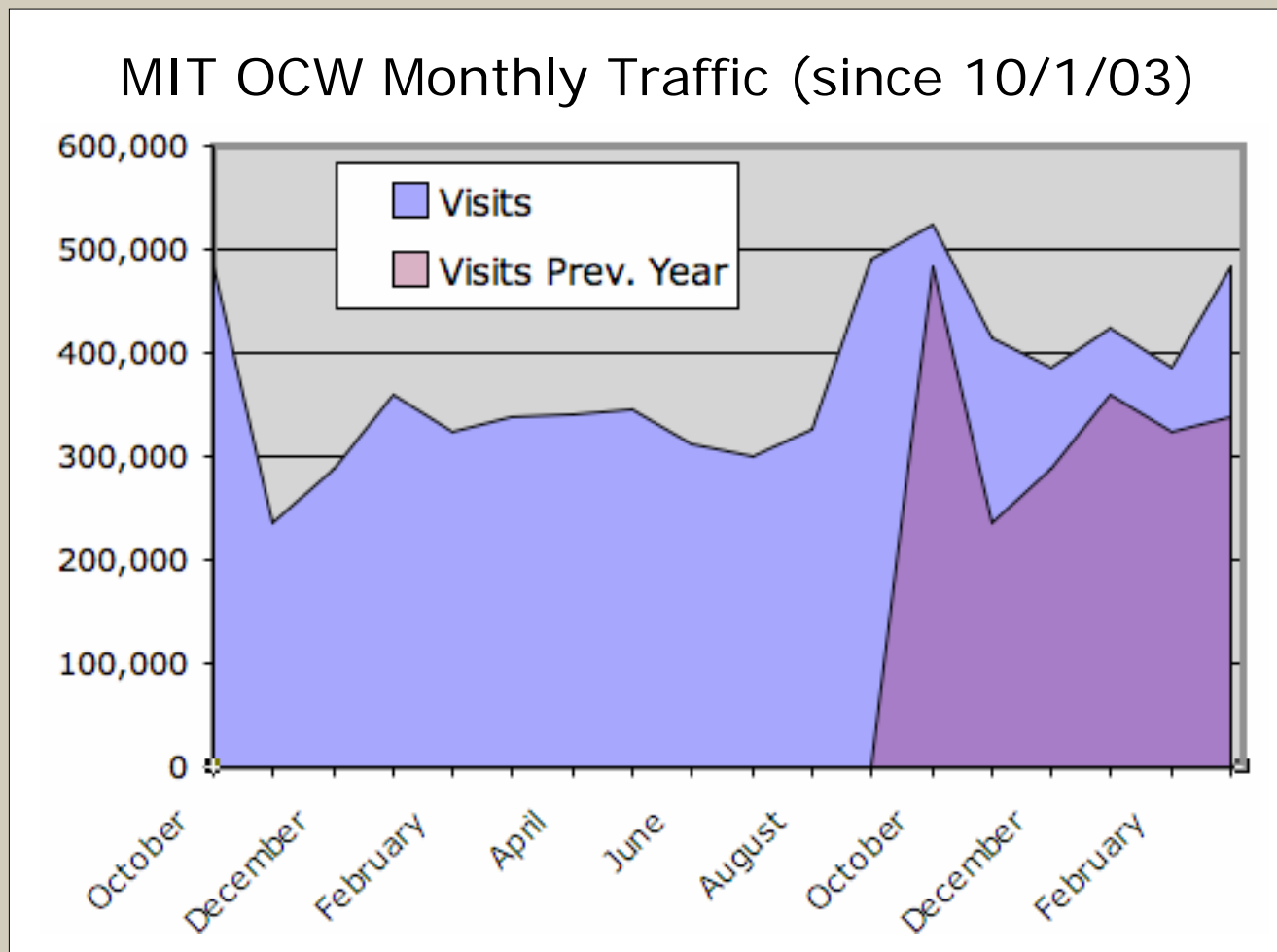
Implementation — Intellectual property

- Course materials available under a Creative Commons license that:
 - Grants users the right to use, distribute, and modify
- Obliges users to meet three use requirements:
 - Use must be non-commercial
 - Materials must be attributed to MIT and original author or contributor
 - Publication or distribution of original or derivative materials must be offered freely under identical terms “share alike”

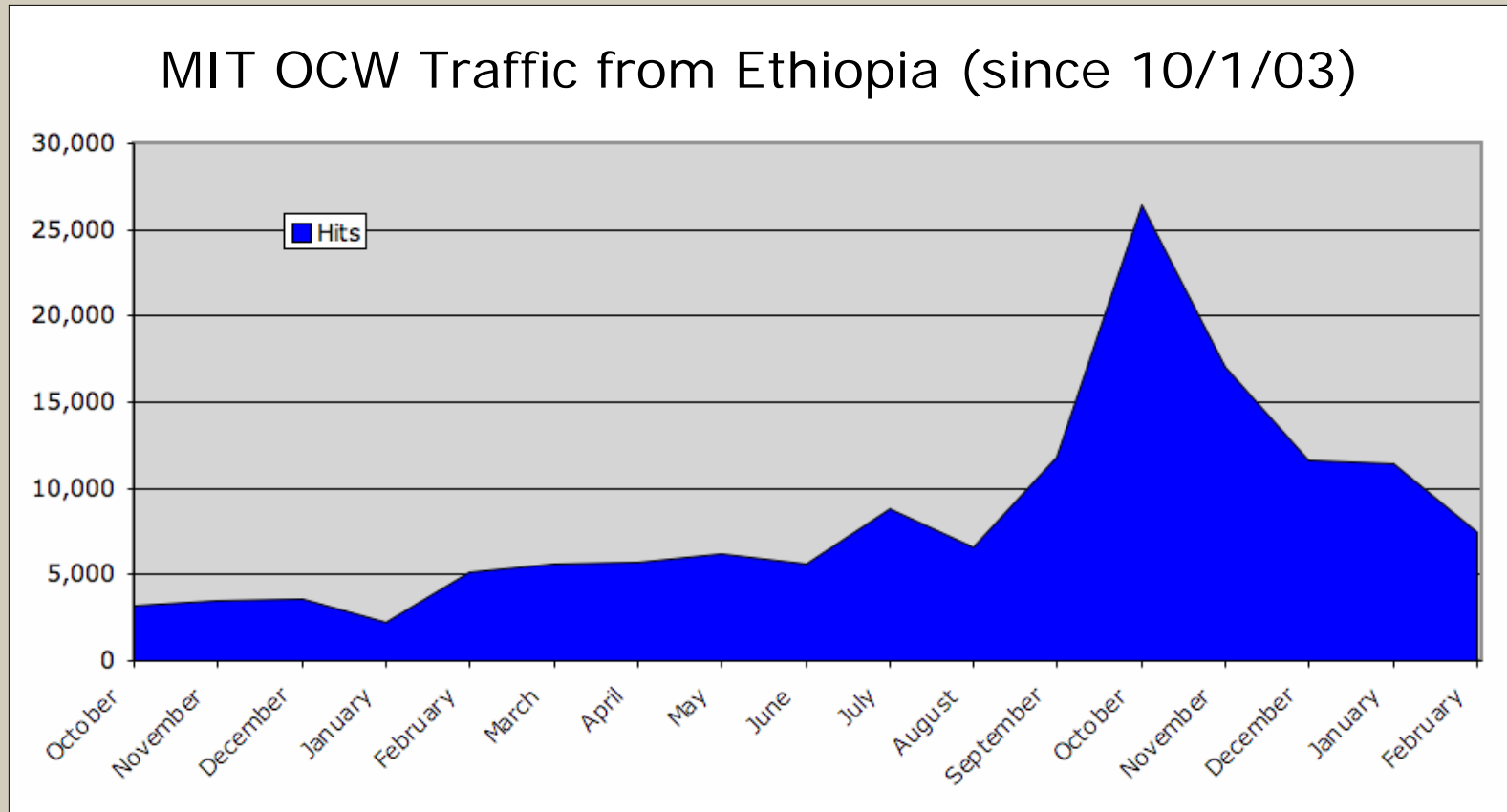


Outcomes

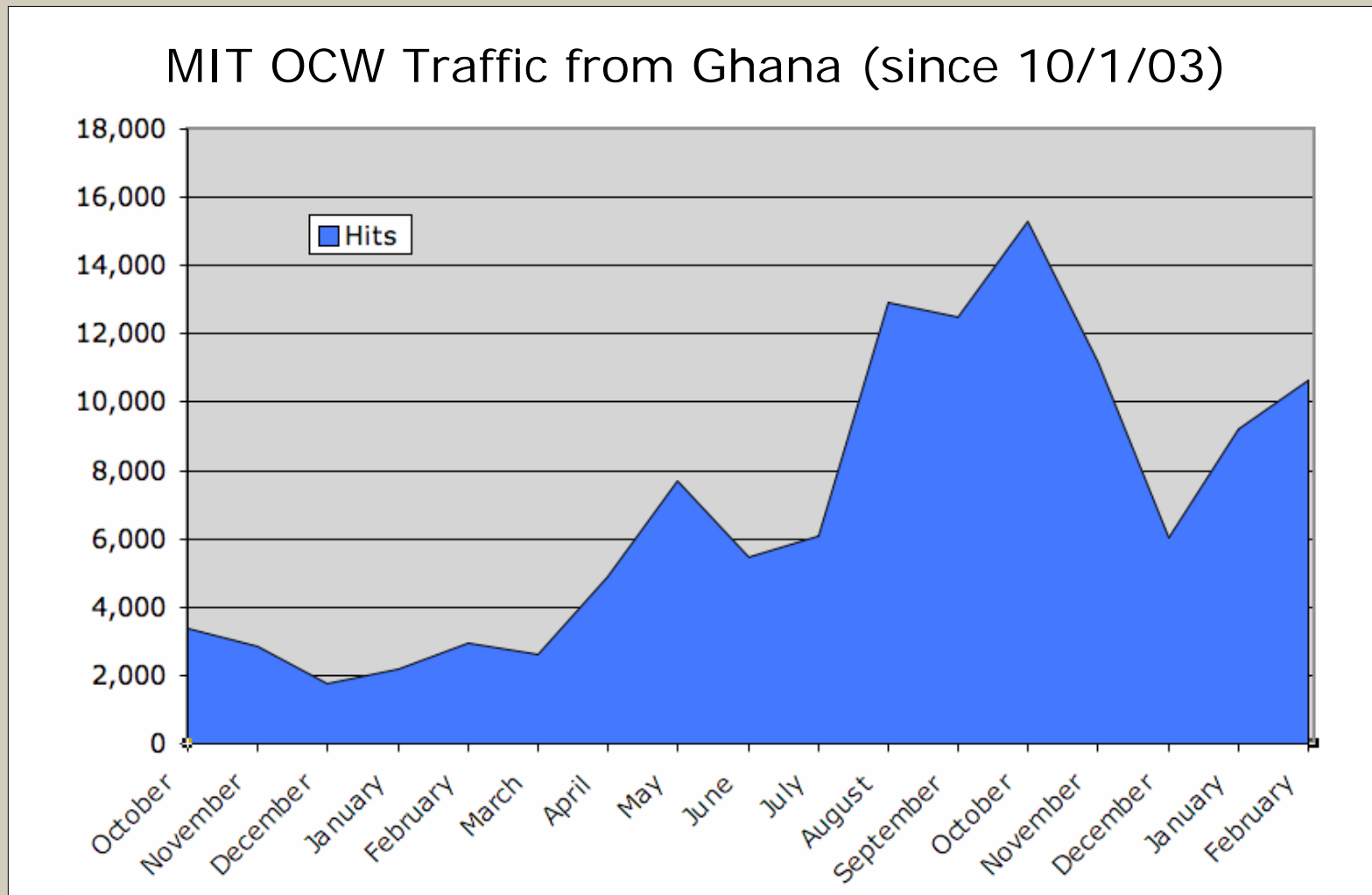
Outcomes — Access data



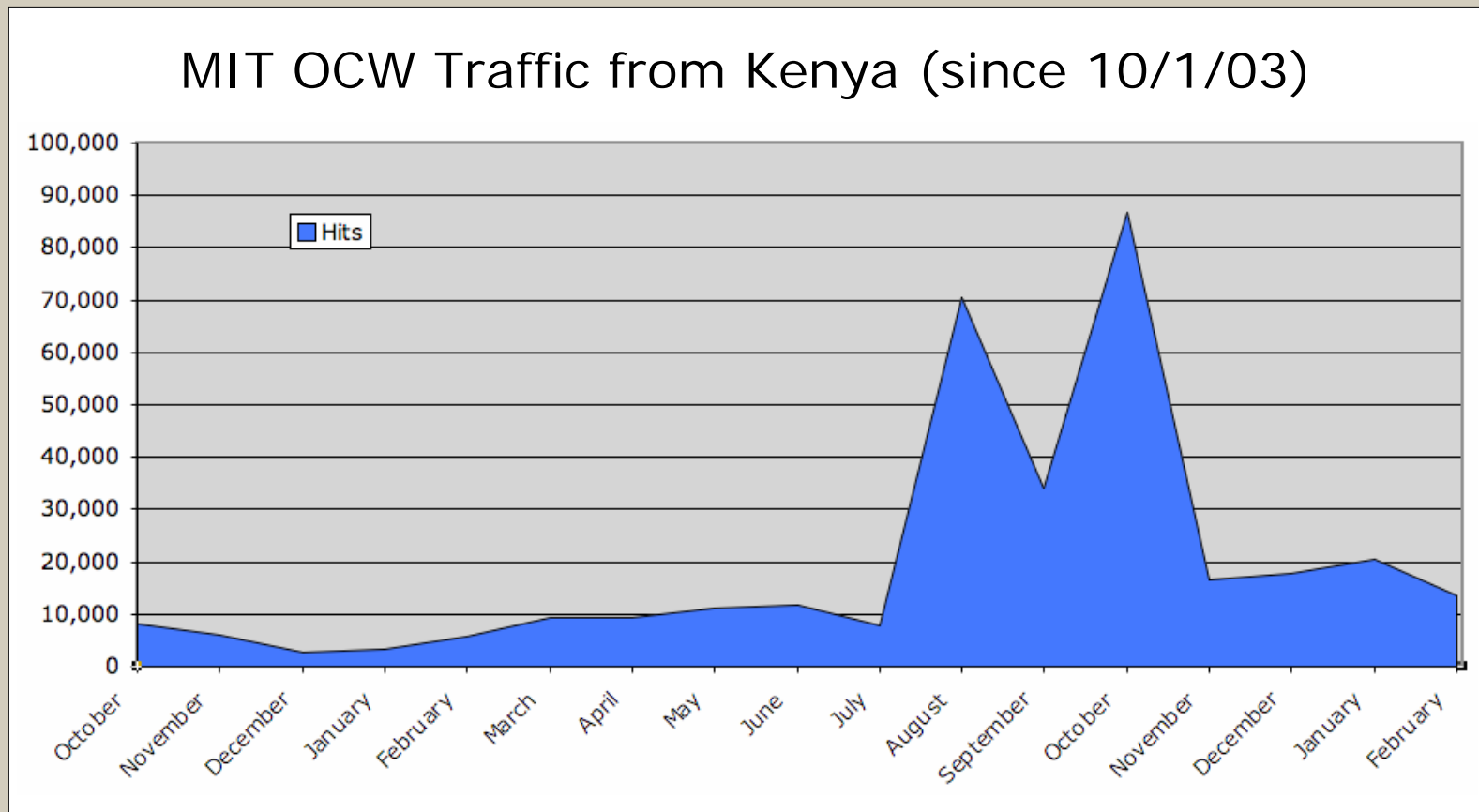
Outcomes — Access data from Ethiopia



Outcomes — Access data from Ghana



Outcomes — Access data from Kenya



Outcomes — Access data

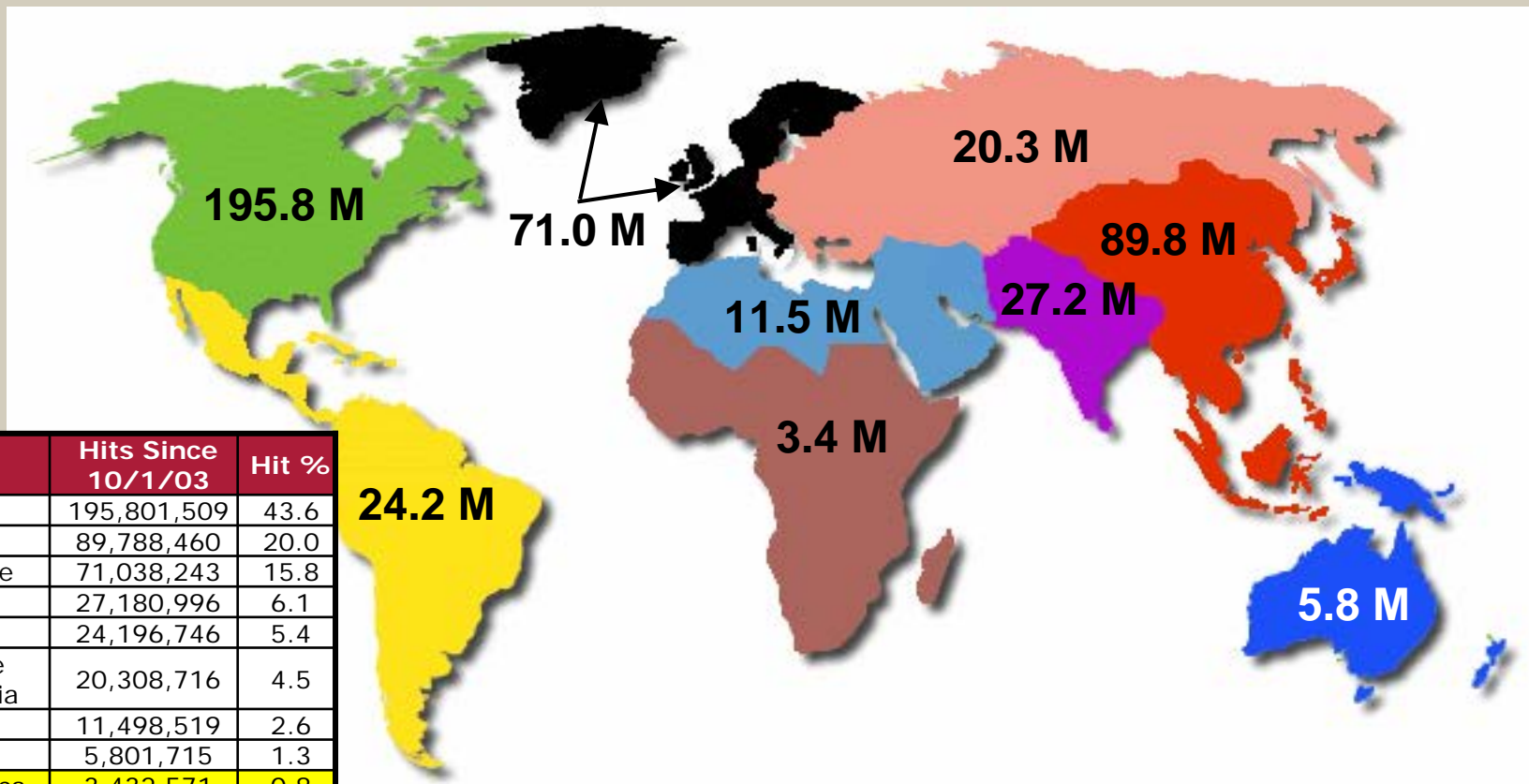
Site Traffic Data (since 10/1/03)

	March 2005	Averages Since 10/1/03*
Average Daily Visits	<i>15,620</i>	<i>12,335</i>
Total Visits	484,205	<i>375,536</i>
First-Time Visits	267,778	<i>197,556</i>
Repeat Visits	216,427	<i>161,810</i>

** Figures in italics are averages*

Outcomes — Access data

Traffic by Geographic Region (in Web hits, since 10/1/03)



Region	Hits Since 10/1/03	Hit %
North America	195,801,509	43.6
East Asia	89,788,460	20.0
Western Europe	71,038,243	15.8
South Asia	27,180,996	6.1
Latin America	24,196,746	5.4
Eastern Europe and Central Asia	20,308,716	4.5
MENA	11,498,519	2.6
Pacific	5,801,715	1.3
Sub-Saharan Africa	3,432,571	0.8
TOTAL HITS	449,047,475	

Outcomes — Access data

Countries with most hits in March 2005 (*outside of U.S.*)

Country		Web Hits
1	China	2,129,103
2	India	1,222,719
3	Canada	1,048,524
4	South Korea	1,008,295
5	Taiwan	974,456
6	United Kingdom	776,755
7	France	529,660
8	Germany	486,608
9	Japan	422,402
10	Brazil	406,532

Country		Web Hits
11	Turkey	380,605
12	Sweden	375,965
13	Italy	357,541
14	Australia	306,286
15	Spain	305,774
16	Singapore	301,704
17	Netherlands	244,064
18	Iran	215,478
19	Indonesia	210,760
20	Mexico	206,790

Outcomes — Overall user profile

- › Visitors generally fit one of three user profiles:
 - Educators are 15.3% of all MIT OCW traffic
 - Students are 31.4%
 - Self-learners are 48.2%
- › 66% of visitors hold a bachelor's or master's degree
- › Visitors most frequently interested in courses in electrical engineering, business, physics, and mathematics
- › Visitors average 1.6 visits per month
- › Review average of 9.36 HTML pages per visit

Outcomes – Use data

Use Scenario		% of Use
Educators	Planning, developing or teaching a course	36%
	Enhancing personal knowledge	22%
	Planning curriculum	10%
	Other	32%
Students	Complementing a subject currently taking	43%
	Enhancing personal knowledge	40%
	Planning future course of study	10%
	Other	7%
Self-learners	Enhancing personal knowledge	81%
	Learning subject matter—course not available for study	9%
	Planning future course of study	8%
	Other	2%

Outcomes — Educator use case study

James, affiliate instructor at the University of Idaho

- Adopted both course material and site structure of an MIT Sloan Course
- Added his own material and modified the MIT OCW site
- *"I will probably differ in that I will introduce the concept of Value Engineering and I have a lecture prepared on FMEA. I haven't seen these topics discussed in the MIT curriculum. But... OpenCourseWare gives me a fast start on the design of the course."*

The screenshot shows the MIT OpenCourseWare website interface. At the top, it displays the MIT OpenCourseWare logo and the University of Idaho logo. The breadcrumb trail indicates the course location: MIT OpenCourseWare > Sloan School of Management > PTTE 404/504 Product Design and Development. The course title is "University of Idaho - Idaho Falls, ID PTTE 404/504 - Product Design and Development, Fall 2004".

On the left side, there is a search bar with options for "All OpenCourseWare" and "This Course", and a "GO" button. Below the search bar are navigation links: "Advanced search", "Course Home", "Syllabus", "Calendar", "Readings", "Lecture Notes", and "Projects".

The main content area features a photograph of a marker refill station with four markers (green, blue, red, black) in a clear plastic holder. Below the photo is a caption: "Marker refill station - a project example from a previous class. (Photo courtesy of instructors of MIT OpenCourseWare Product Design and Development.)"

Below the photo is the "Highlights of this Course" section, which describes the course as a project-based course where students design a new product and produce a prototype. It mentions that the course includes lecture notes in PDF format, project examples and guidelines for projects, and a textbook titled "Product Design and Development" co-written by Professor Steven Eppinger. It also notes that the course uses "Value Engineering: A Plan for Invention" by Richard Park.

The "Course Description" section states that the course covers modern tools and methods for product design and development, with a focus on a project where teams of management, engineering, and industrial design students conceive, design, and prototype a physical product. It lists topics such as identifying customer needs, concept generation, product architecture, industrial design, Quality Function Deployment, Value Engineering, TRIZ (The Theory of Invention), Failure Modes and Effects Analysis, and design-for-manufacturing.

On the right side, there is a "Staff" section listing MIT Instructors (Prof. Steven Eppinger, Dr. Daniel Whitney, Mr. Matt Kresny of Rhode Island School of Design, Prof. Thomas Roemer, Dr. Clifford Whitcomb, Dr. Ali Yassine) and the U of I Instructor (James R. Wikson, CVS, CMfgE, e-mail: wix@srv.net, Phone: (208) 526-7784). It also lists the course meeting times (Tues. evenings 7:00 - 9:40 PM UPHEC 305) and the level (Joint Listed PTTE 404/504 Undergraduate/Graduate). A note indicates that U of I course content is displayed in magenta colored text. There is also a "Feedback" section with a link to send feedback about the course.

Outcomes — Institute use case study

- 70 students taught by MIT's Africa Internet Technology Initiative (AITI) at the University of Ghana in Legon

"[AITI] downloaded all the material from Course 1.00 and provided it offline. We modified the links to work in off-line mode, and we distributed a version to every student... Students literally applauded."

— Excerpt from AITI Preliminary Report

- AITI Computer Science Department using MIT OCW materials to update its curriculum



OCW reflects current trends and thus provides an immediate bridge of the digital divide that would otherwise take five years to cross... Other sources for curriculum review include so much hassle and bureaucracy that by the time the review is made the material is easily years old... OCW bypasses all of that by connecting everyone in real-time to MIT's most up-to-date material."

Professor Jacob Aryeetey, head of Computer Science Dept.

Outcomes — User impact

Visitor Impact Statement Agreement

Statement	Strongly Agree/ Agree	Neutral	Disagree/ Strongly Disagree
Helped me be more productive and effective	81.1%	18.3%	0.5%
Helped me learn	88.0%	11.6%	0.5%
Improved my courses using OCW (Educators)	84.5%	12.9%	2.7%
Increased my motivation and interest in learning	80.2%	19.0%	0.8%
I would recommend OCW to others	92.5%	7.1%	0.5%

Source: 2004 Intercept Survey

Outcomes — Feedback data

- > 21,000 emails to ocw@mit.edu
 - Majority (60+ percent) are grateful or congratulatory
 - Other inquiries
 - How to register
 - Technical questions
 - Inquiries from other educators
 - Vendors
 - Negative responses (less than 1 percent)
- > 32,000 users self-subscribed to monthly email newsletter

Outcomes — Feedback

According to users, MIT OpenCourseWare is:

“... the Eighth Wonder of the World.”

“... the Big Bang of the Knowledge Universe.”

“... the greatest thing any institution of higher learning has ever done.”

“... one of the best things ever in history.”

“... like falling in love.”

“... the coolest thing on the Internet.”

“... worthy of the next Nobel Peace Prize.”

Outcomes — Benefits for MIT

> Institute-level benefits

- Advances MIT's institutional mission
- Enhances MIT's image around the world
- Generates community pride (alumni)
- Stimulates collaboration among faculty

> Department-level benefits

- Showcases individual departments and their curricula
- Enhances faculty and student recruitment efforts
- Accelerates adoption of the Web

Outcomes — Benefits for MIT faculty

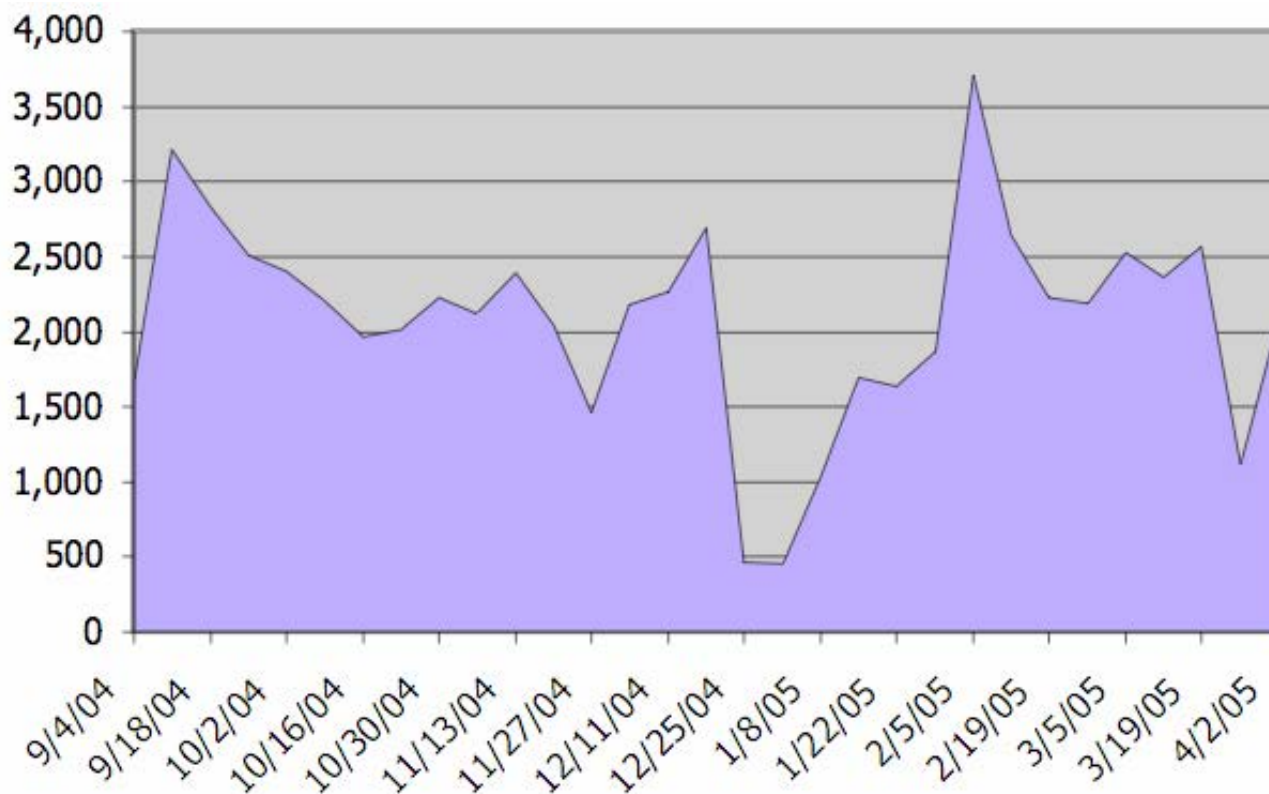
- 1 in 5 courses on MIT OCW (175) had no prior Web site
- MIT OCW has transcribed lecture notes for 44 subjects, and created more than 2,500 open images
- 32% of MIT faculty report using their MIT OCW site for teaching, advising and research
- *“I think [OCW] is a great way for MIT to put its principles into highly visible action... People all over the world, of whatever status and background, need only a computer to see what is happening here and begin thinking about how they can benefit from it.”*
— MIT History Professor

Outcomes — Benefits for MIT students

- More than 100,000 visits from MIT.EDU in 18 months
- 68% of MIT students use the site (excluding freshmen)
- 95% of MIT students report positive impact on student experience
- 53% of MIT freshmen are aware of MIT OCW
- 16% of freshmen say it influenced their decision to attend MIT
- *“This is a great way to go back and review material from a class I took in the past (I do this as part of my research and to prepare for job interviews). It makes the material more accessible and much more useful.”*
— **MIT EECS Graduate Student**

Outcomes — Benefits for MIT students

MIT.EDU Traffic (since January 1, 2004)



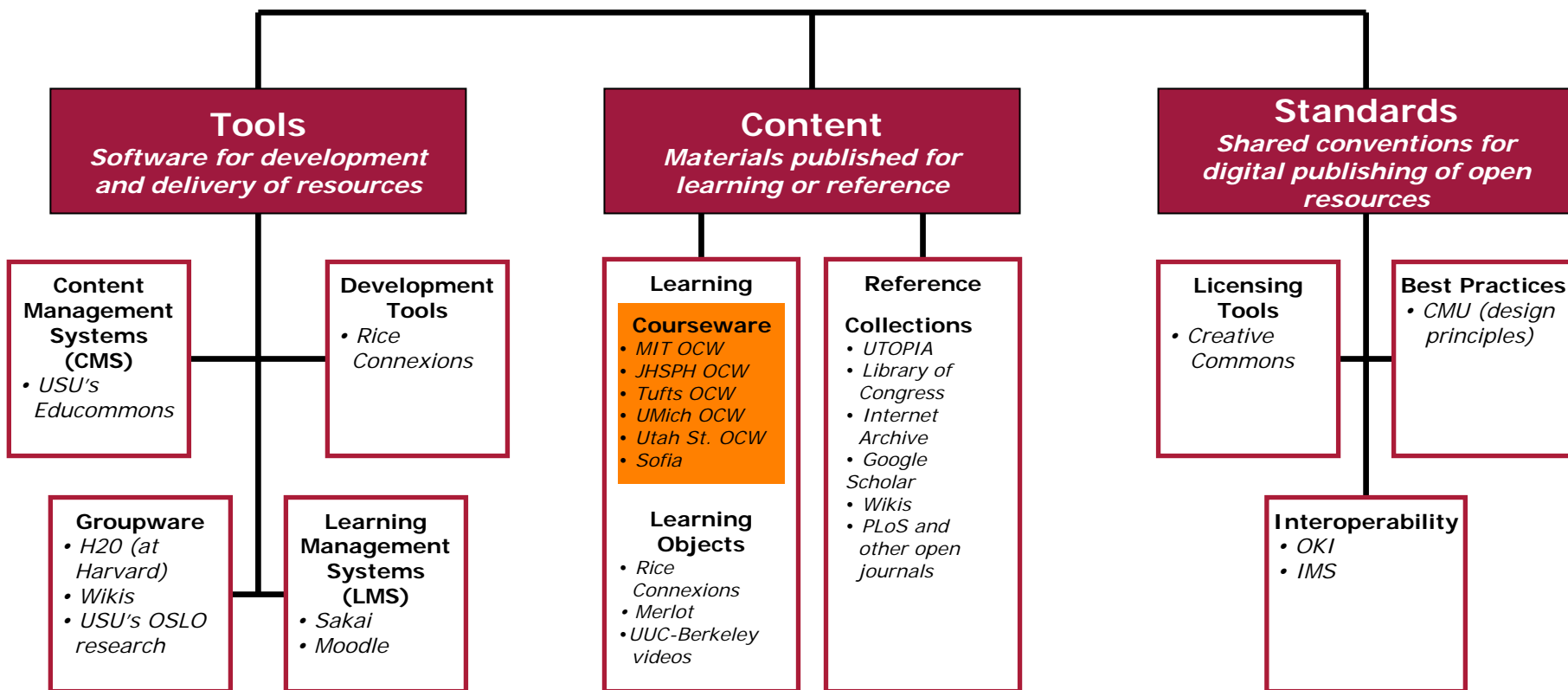
- > 9,362 visits in March from MIT.EDU
- > 108,672 total visits from MIT.EDU since 1/1/04
- > Traffic from MIT.EDU domain follows periods of peak student use



What It Means

Meaning — Open sharing at universities

The World of Open Educational Resources



Meaning — Emerging “opencoursewares”

- Other OCWs are beginning to appear — both in the United States and abroad

UTAH STATE UNIVERSITY
opencourseware

home courses content news help about us

Available Departments: home + courses + biological and irrigation engineering

Biological and Irrigation Engineering

ABOUT BIOLOGICAL AND IRRIGATION ENGINEERING

The Biological and Irrigation Engineering (BIE) department applies the art and science of engineering principles to the solution of problems in biological systems, and to the creation of new biological-based systems, processes, and products. The department also prepares students for entry into professional schools, including medicine, law, and veterinary science.

Utah State University

JHSPH OPEN COURSEWARE
Johns Hopkins Bloomberg School of Public Health

Search

Available Courses

A Wealth of Knowledge Free to the World: JHSPH OpenCourseWare

The Johns Hopkins Bloomberg School of Public Health is pleased to welcome you to the initial phase of its pilot Open-CourseWare (OCW) project, providing free and open access to the School's most popular courses to students, self learners, and educators anywhere in the world. We are launching our OCW web site with two courses and expect to publish eight additional courses by April 2005, followed by many more courses in the coming years.

Upcoming Courses

Challenges to the world's health escalate daily. As part of its mission to protect health and prevent disease and disability, the School feels a moral imperative to provide equal and open access to information and knowledge about the obstacles to the public's health and their potential solutions.

At the heart of every public health triumph is an individual. OpenCourseWare provides encouragement for the self learner to seek formal education, complementary materials for the student at JHSPH or another institution, information with which faculty can plan a course curriculum, and continuing education for the public health practitioner.

Johns Hopkins School of Public Health

RAI COURSEWARE
RAI UNIVERSITY

Welcome to Rai Courseware, opening the treasure trove of knowledge and related resources.

Available Courses

- Architecture
- Biosciences & Technology
- Computing
- Electronics
- Mechanical
- Management
- Mass Communication
- Insurance
- Media-Moving Image
- Hospitality & Tourism
- Fashion
- Healthcare
- Aviation
- Law
- Fine Arts
- Vedic Sciences & Religion
- Public Administration

Welcome to Rai CourseWare

Rai Open Courseware is yet another milestone in Rai University's quest of bringing world-class higher education within the reach of one and all. With the Rai Open Courseware available free on the net, learning is just a click away for self learners who aspire to add value to themselves and thereby for the community at large.

The Rai open courseware can be, if you wish simply downloaded from the Internet. Educational institutions who wish to use it for their students can also do so by only providing an acknowledgement to Rai University as 'Source'.

Rai Courseware:

- Does not require any registration.
- Is an open educational resource for students and self-learners.
- Facilitates flexibility of learning.
- It reflects what is being taught in our own classrooms at our 21 campuses.

Academic Program | Course List | Feedback

Rai University in India

Meaning — Universia translations

- Universia.net is a network of 840 universities in Spain, Portugal, and Latin America
- 90 courses in Spanish and Portuguese through Universia.net partnership

The screenshot shows the MIT OpenCourseWare website with a Spanish translation overlay. The header includes the MIT OpenCourseWare logo and the text 'Portal Universia y MIT les invita a utilizar gratuitamente esta selección de materiales de curso de MIT traducidos al español.' Below the header is a navigation menu with links: 'Página principal', '¿Qué es OCW?', 'Ayuda', 'Feedback', 'Preguntas frecuentes', and 'Glosario'. A search bar is visible with the text 'Buscador' and a search button labeled 'IR'. A section titled 'CURSOS TRADUCIDOS' lists several courses with their IDs and titles in Spanish, such as '11.208 Introducción a la informática en la gestión pública' and '6.170 Curso práctico en Ingeniería del Software'. A welcome message in Spanish reads: 'MIT, su equipo de OpenCourseWare y Portal Universia les da la bienvenida a este nuevo sitio que pretende facilitar el acceso de académicos iberoamericanos a los materiales docentes y de estudio puestos a libre disposición por el MIT en Internet.' Below this, a table compares MIT OpenCourseWare with the Spanish translation. The table has two columns: 'MIT OpenCourseWare es:' and 'MIT OpenCourseWare no es:'. The first column lists 'Publicación de materiales de estudio por parte del MIT.' and 'Gratis y abierto al mundo.' The second column lists 'Un programa que ofrezca un título.' and 'Una enseñanza MIT.' Below the table, a section titled 'MIT OPENCOURSEWARE: RECURSOS' includes a link to 'FAQs: Busca la respuesta a tus preguntas sobre MIT OCW.'

Meaning — CORE translations

> China Open Resources for Education (CORE)

- 100 university members in PRC
- 10 to 20 million users



> Objectives

- Enhance the quality of education in China
- Translate MIT and other courses into Chinese
- Offer Chinese courses for sharing globally

Meaning — What does it mean?

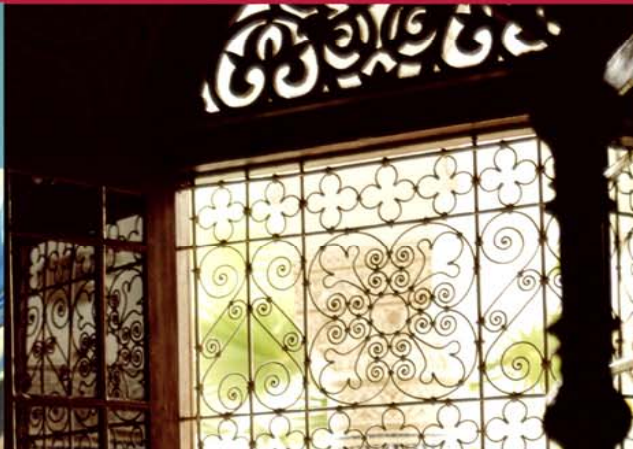
- Continues to be tremendous excitement
- The vision is achievable
- The impact of MIT OpenCourseWare will be significant



Thank You!

Visit MIT OpenCourseWare online at
<http://ocw.mit.edu>

Visit the "Opencourseware How To" site on the Web at
<http://ocw.mit.edu/OcwWeb/HowTo/index.htm>



MIT OpenCourseWare
<http://ocw.mit.edu>

EC.S01 Internet Technology in Local and Global Communities
Spring 2005-Summer 2005

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