

SYLLABUS-AT-A-GLANCE – ROUGH DRAFT

	<u>Session topic</u>	<u>Assignment due</u>
	<u>INTRODUCTION</u>	
1	9-Feb-09 Introduction and Overview	
	<u>WEB 2.0</u>	
	<u>WEB 2.0 EXAMPLES</u>	
2	9-Feb-09 Web 2.0 & User generated content	
3	17-Feb-09 Early Mashups (Tues)	
4	17-Feb-09 Collective Intelligence. Guest Speaker: Robert Laubacher (MIT Center for Collective Intelligence).	
6	23-Feb-09 Social networks	
5	23-Feb-09 Two-sided platforms/markets. Guest speaker: Erik Brynjolfsson , (Director, MIT Center for Digital Business)	
	<u>WEB 2.0 TECHNOLOGIES</u>	
8	2-Mar-09 Mobile/Geo/3D web	<i>TP member list</i>
	<u>WEB 2.0 IMPACT</u>	
7	2-Mar-09 Broad Impact on Business and Society. Guest speaker: Daniel J. Weitzner , (Director, W3C Technology and Society Policy)	
9	9-Mar-09 General impacts & success stories	<i>TP proposal</i>
10	9-Mar-09 Open Innovation	
	<u>WEB 2.x</u>	
11	30-Mar-09 Introduction to Web 2.x technologies	
	<u>WEB 2.x TECHNOLOGIES</u>	
12	30-Mar-09 Web Services	
13	6-Apr-09 Cloud Computing	
	<u>WEB 2.x EXAMPLES</u>	
14	6-Apr-09 Component Examples, OpenAPIs, and Advanced Mashups	
15	13-Apr-09 Collaboration Examples. Guest speaker: Satwik Seshai (IBM).	
	<u>WEB 3.0</u>	
16	13-Apr-09 Introduction to Web 3.0 & Semantic web concept	
	<u>WEB 3.0 TECHNOLOGIES</u>	
17	27-Apr-09 Semantic Web. Guest speaker (tentative): Tim Berners-Lee (MIT and Director, World Wide Web Consortium – W3C).	
18	27-Apr-09 Semantic Representation: Ontology Languages	
19	4-May-09 Semantic Reasoning	
	<u>WEB 3.0 APPLICATIONS & IMPACTS ON MANAGEMENT</u>	
20	4-May-09 Web 3.0 Applications	<i>TP Project Reports</i>
21	11-May-09 Web 3.0 Impacts on Management	
	<u>STUDENT PRESENTATIONS</u>	
22	11-May-09 Student Presentations	<i>TP Presentations</i>

Note: Some of the session numbers are out of order (e.g., session 6 listed before 5). This is to accommodate the schedules of Guest Speakers, who often preferred the 4-5:30 time slot on that day. The sessions will be conducted in their numerical order.

Useful Information

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WEB SITE

15.579 web site is accessed via Stellar

If you are not a Sloan student with access to Stellar, let the TA's know.

READINGS

The sources for the Readings are primarily Internet Downloads:

The readings that we had included in the Course Packet in the past (and that you had to pay for) are now available for free on the Internet. That also gives you the choice of printing them out or reading them online.

Some of the Internet Downloads are available free because of MIT's subscription to certain services. In that case, you must access them through a computer on the mit.edu network or use the special procedures (see <http://libraries.mit.edu/vera>) available through the MIT Library Services (requiring MIT certificates).

You will be held responsible for reading the assigned materials and being prepared for class discussion. Optional or suggested readings may also be identified for various topics to allow further study for those interested in more depth.

ASSIGNMENTS AND EXAMS

Assignments:

- There are 3 kinds of assignments in this class: (1) assigned readings, (2) written homework assignments, including case writeups, and (3) a term project.
- Each assignment is due in class on the date indicated on the syllabus. These due dates are firm. If you anticipate a problem, see the instructor beforehand!
- Since partial credit is given, it is much better for you to turn in a partially complete assignment than to turn in nothing at all. Points will be subtracted for late homework. These assignments are important because: (1) they help to reinforce the concepts presented in class, (2) they prepare you for the examinations, and (3) they constitute a significant portion of your final grade.

GRADES POLICY

Grades will be assigned based on the following guidelines (subject to change):

- Class participation: 20%
- Homework: 40%
- Term Project: 40%

Professional Conduct and Academic Integrity:

- Students are expected to be knowable about and observe Sloan's Professional Conduct standards.
- All assignments, except if indicated otherwise, are to be done individually, as explained in the memo, "Sloan School Policy on Individual Work."
- However, the Term Project and Computer Project (except for part CP1) are intended to be team efforts. In those cases, all members of the team are expected to contribute equally.

Description of Sessions and Reading List

(as of 12/07/2008 – subject to change)

To save both most printing and copyright charges, we have provided the URLs for most of the readings. They can be accessed for free while on the MIT network (it is recommended that you access and either print or save to disk while at MIT). Sometimes merely clicking on the URLs will get you the article, sometimes you may need to “cut & paste” URL into your browser. Most can be also accessed at home, using the MIT private virtual network and/or instructions that can be found at <http://libraries.mit.edu/vera>

INTRODUCTION

1 Introduction and Overview

Introduction to the course. Class will discuss the characteristics and distinctions between Web 1.0, 2.0, 2.x, and 3.0 and current trends.

WEB 2.0

WEB 2.0 EXAMPLES

2 Web 2.0 & User generated content

Discussion of the definition of “Web 2.0” and the transition of the Web from users who only are consumers of content to users as generators of content, known as User Generated Content (UGC)? Discussion of successful consumer and business applications.

- a) Tim O’Reilly, “What is Web 2.0: Design Patterns and Business Models for the Next Generation of Software,” Communications & Strategies, No. 1, 2007, pp. 17-37.

Tim O’Reilly is generally credited with coining the term “Web 2.0” This paper was his first initiative to define “Web 2.0” and understand its implications. He defined the core competencies of Web 2.0 companies to be: (1) services, not packaged software, with cost-effective scalability, (2) control over unique, hard-to-recreate data sources that get richer as more people use them, (3) trusting users as co-developers, (4) harnessing collective intelligence, (5) leveraging the long tail through customer self-service, (6) software above the level of a single device, (7) lightweight user interfaces, development models, and business models.

[http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1008839]

3 Early Mashups and Web Aggregators

Mashups have recently become the basis of many new business models and online services.

- a) “Mashup (web application hybrid),” Wikipedia, (last modified on 30 November 2008, at 03:58), 6 pages (in print format).

In web development, a mashup is a web application that combines data from more than one source into a single integrated tool. The term Mashup implies easy, fast integration, frequently done by access to open API's and data sources to produce results data owners had no idea could be produced. An example is the use of cartographic data from Google Maps to add location information to real-estate data, thereby creating a new and distinct web service that was not originally provided by either source.

[[http://en.wikipedia.org/wiki/Mashup_\(web_application_hybrid\)](http://en.wikipedia.org/wiki/Mashup_(web_application_hybrid))]

- b) Stuart Madnick and Michael Siegel, “Seize the Opportunity: Exploiting Web Aggregation”, MISQ Executive, Vol 1, Issue 1, March 2002, pp. 35-46.

This paper examines the development of aggregators, entities that collect information from a wide range of sources, with or without prior arrangements, and add value through post-aggregation services. Two key types of aggregators are comparison and relationship aggregators. It also suggests different business models as possible aggregator entry points into an industry and describes their impact on the value chain.

[<http://web.mit.edu/smadnick/www/wp/2001-13.pdf>]

- c) (Optional) Hongwei Zhu and Stuart Madnick, “One Size does not Fit All: Legal Protection for Non-Copyrightable Data”, Communications of the ACM, to be published, expected 2009.

This paper discusses the legal issues related to data re-use, including the European Union’s Database Directive.

[<http://web.mit.edu/smadnick/www/wp/2007-04.pdf>]

4 Collective Intelligence and Recommendation systems

Guest Speaker: Robert Laubacher (MIT Center for Collective Intelligence).

While people have talked about collective intelligence for decades, new communication technologies—especially the Internet—now allow huge numbers of people all over the planet to work together in new ways. The successes of systems like Google and Wikipedia suggest that the time is now ripe for many more such systems, and the goal of the MIT Center for Collective Intelligence (CCI) is to understand how to take advantage of these possibilities. CCI’s basic research question is: How can people and computers be connected so that—collectively—they act more intelligently than any individuals, groups, or computers have ever done before?’

- a) Jeff Howe, “The Rise of Crowdsourcing,” Wired magazine, downloaded December 2008, 5 pages.

Remember outsourcing? Sending jobs to India and China is so 2003. The new pool of cheap labor: everyday people using their spare cycles to create content, solve problems, even do corporate R & D.

[http://www.wired.com/wired/archive/14.06/crowds_pr.html]

- b) Scott Cook, “The Contribution Revolution: Letting Volunteers Build Your Business,” Harvard Business Review, Vol. 86 Issue 10, October 2008, pp.60-69.

Many internet superstars owe much of their success to the contributions made by countless people from outside their organizations. Cook, the founder of Intuit (maker of products such as Quicken and TurboTax), challenges traditional companies to tap this emerging source of value by actively creating what he calls user contribution systems. He creates a taxonomy of the systems that can capture user contributions and shows the variety of ways in which companies from Honda to Procter & Gamble to Hyatt Hotels are leveraging them. He offers advice on how business leaders can catalyze action to create user contribution systems in their own organizations.

[Go to <http://libraries.mit.edu/vera> Do Exact Search on “Harvard Business Review”, choose year 2008, then month October, and go to paper #15.]

- c) Yochai Benkler, “Peer Production and Sharing,” chapter 3 of Wealth of Networks (Yale U. Press), 2006, 22 pages.

This chapter provides an overarching model that includes detailed descriptions of several interesting case studies in a way that nicely illustrates the framework.

[<http://www.congo-education.net/wealth-of-networks/ch-03.pdf>]

5 Social networks

Many social network services, such as Facebook, MySpace and LinkedIn, have emerged. Class will discuss social networking theory in the fields of information dissemination, marketing and productivity, and how business can harness emerging social web technologies to their advantage.

- a) Josh Bernoff, Charlene Li, "Harnessing the Power of the Oh-So-Social Web," Sloan Management Review, Spring 2008, Vol. 49, Issue 3, pp. 36-42.

People are connecting with one another in increasing numbers, thanks to blogs, social networking sites like MySpace and countless communities across the Web. Some companies are learning to turn this growing groundswell to their advantage.

[Go to <http://libraries.mit.edu/vera> Select Exact Search for "Sloan Management Review" and choose "Continued by MIT Sloan management review", then choose "Full text - ProQuest ABI/INFORM Global," then select "Spring 2008" and go to article #5]

- b) Danah m. Boyd, Nicole B. Ellison, "Social Network Sites: Definition, History, and Scholarship", Journal of Computer-Mediated Communication, Volume 13, Issue 1, 17 Dec 2007, pp. 210-230.

Social network sites (SNSs) are increasingly attracting the attention of academic and industry researchers intrigued by their affordances and reach. This paper describes features of SNSs and propose a comprehensive definition. It then present one perspective on the history of such sites, discussing key changes and developments. After briefly summarizing existing scholarship concerning SNSs, it discusses other relevant articles and concludes with considerations for future research.

[Go to <http://libraries.mit.edu/vera> Select Exact Search for "Journal of Computer-Mediated Communication" and choose "Full text - Synergy Blackwell" then select "2007", then select "Volume 13 Issue 1 - October 2007", go to the 11th article]

6 Two-sided platforms/markets

Guest speaker: Erik Brynjolfsson, (Director, MIT Center for Digital Business)

Many successful Web 2.0 businesses are based on a two-sided platform-- between, for example, social network users and advertisers. This session will discuss strategies for two-sided markets and ways to exploit the network efforts of Web 2.0.

- a) Thomas Eisenmann, Geoffrey Parker and Marshall van Alstyne, "Strategies for Two-Sided Markets" Harvard Business Review, Vol. 84, Issue 10, October 2006, pp. 92-101.

This article reports on strategies for two-sided markets. Companies in industries such as banking, software, and media make money by linking markets from different sides of their customer networks – e.g., audiences and advertisers. The distinct character of these businesses demands a new approach to strategy. Of the blockbuster products and services that have redefined the global business landscape, you will find that many of them tie together two distinct groups of users in a network.

[Go to <http://libraries.mit.edu/vera> Do Exact Search on "Harvard Business Review", choose year 2006, then month October, and go to paper #19.]

- b) Geoffrey Parker and Marshall van Alstyne, "Two-Sided Network Effects: A Theory of Information Product Design," Management Science, Vol. 51, Issue 10, October 2005, pp. 1494-1504.

This paper refines the concept of "network effect" and uses this to explain free goods and seemingly anomalous pricing behavior in the Internet Economy. Results affect almost any market that seeks to introduce a new goods format. Since network industries tend to concentrate, pricing issues also matter to antitrust law.

[Go to <http://libraries.mit.edu/vera> Do Exact Search on "Management Science", select option: "Full text - ProQuest ABI/INFORM Global Available from 1987," choose date October 2005, and go to paper #11.]

WEB 2.0 TECHNOLOGIES

7 Mobile/Geo/3D web

The proliferation of mobile devices, as well as satellite imagery and geographic databases, is quickly changing the way we access the internet, search for information and interact socially. In the meantime, these technologies allow companies to collect more detailed and personal data about us. Class discussion will cover current state of the art, such as Geographic Information Systems, mobile development platforms, and 3D web, such as 2nd Life.

- a) Adam Reuters, "IBM to host private Second Life regions," Reuters, April 2, 2008, 2 pages.

IBM said it will become the first company to host private regions of the Second Life Grid on its own servers, marking a new focus by Linden Lab on serving corporate customers.

[<http://secondlife.reuters.com/stories/2008/04/02/ibm-to-host-private-second-life-regions/>]

- b) Eric Krangel, "IBM Drinks Second Life Kool-Aid, Makes More For Lotus Users, | September 4, 2008, 3 pages.

This article describes how IBM is integrating support for Second Life (and a few other virtual world platforms) into its Lotus Sametime corporate instant-messaging product. It also includes a YouTube video demonstration.

[<http://www.alleyinsider.com/2008/9/ibm-drinks-second-life-kool-aid-makes-more-for-lotus-users-ibm->]

- c) Stephen Prentice, "The Five Laws of Virtual Worlds," Gartner Research, ID Number: G00148019, 13 July 2007, 5 pages.

Virtual worlds are a hot topic and subject to much hype and misinformation. Enterprises seeking to evaluate their plans should use five guidelines to frame their assessments.

- d) More readings to come ...maybe replace some of the above ...

WEB 2.0 IMPACT

8 Broad Impact on Business and Society

Guest speaker: Daniel J. Weitzner, (Director, W3C Technology and Society Policy)

The web needs to support the basic social values of trustworthiness, privacy, and respect for social boundaries.

- a) Weitzner, D. J., Abelson, H., Berners-Lee, T., Feigenbaum, J., Hendler, J., and Sussman, G. J. "Information Accountability," Communications of the ACM, June 2008, pp. 82-87.

Existing legal and technical mechanisms intended to protect our privacy, copyright, and other important values have been overwhelmed by the increasingly open information environment in which we live. These threats follow from the ease of information storage, transportation, aggregation, and analysis. We face the real risk

that the technical laws spelled out by Gordon Moore (growth in processing power) and Robert Metcalfe (network effects) will permanently overwhelm our values as enshrined in society's laws.

[<http://doi.acm.org/10.1145/1349026.1349043> or <http://dig.csail.mit.edu/2008/06/info-accountability-cacm-weitzner.pdf>]

- b) David Talbot, "How Obama **Really** Did It:" MIT Technology Review, September/October 2008, 10 pages.

A description of the social-networking strategy that took an obscure senator to the doors of the White House.

[www.technologyreview.com/web/21222 It is free, but you might need to register with Technology Review.]

9 General impacts & success stories

Web 2.0 provides opportunities to create new businesses and change existing businesses. These can be based on Consumer-consumer; consumer-business, or business-business interactions.

10 Open Innovation

Many companies have discovered that there is an alternative to total reliance on internal R&D. By harnessing the power of the web, companies can tap into a world-wide pool of experts.

- a) Henry W Chesbrough, "The era of open innovation," MIT Sloan Management Review, Vol.44, Issue.3, Spring 2003, pp. 35-41.

This paper discusses how companies are increasingly rethinking the fundamental ways in which they generate ideas and bring them to market — harnessing external ideas while leveraging their in-house R&D outside their current operations.

[Go to <http://libraries.mit.edu/vera> Select Exact Search for "Sloan Management Review" and choose "Continued by MIT Sloan management review", then choose "Full text - ProQuest ABI/INFORM Global," then select "Spring 2003" and go to article #10]

- b) Milton Sousa, "Open innovation models and the role of knowledge brokers," InsideKnowledge, Volume 11, Issue 6, February 29, 2008, pp. 18-22.

The movement from internal R&D to external connect and develop opens the door for companies – large and small – to reach beyond their core competencies to remain competitive in an increasingly complex, uncertain and changing environment. This report explains the phenomenon, the process and provides examples and a case report.

[<http://www.openinnovatie.nl/download/LowResIKMarch08Case%20Study.pdf>]

- c) InnoCentive, "InnoCentive Corporate Overview", InnoCentive, Inc., 2008, 2 pages.

InnoCentive inspires and unites a web community of scientists, engineers, professionals and entrepreneurs worldwide who collaborate to deliver breakthrough solutions for some of the world's most progressive organizations.

[http://www.innocentive.com/assets/pdfs/InnoCentive_Corporate_Overview.pdf]

WEB 2.x

11 Introduction to Web 2.x technologies

To be filled in ...

WEB 2.x TECHNOLOGIES

12 Web Services

This session will discuss: what are web services and the technologies behind them. Some of the key players and their respective platforms will be discussed, as well as perspectives among providers and consumers.

- a) "The Strategic Value of Web Services," The McKinsey Quarterly, November 2002, 35 pages.

This is a collection of three articles that address: (1) how web services will automate the flow of information among companies, (2) what are web services, and (3) how web services are making companies more flexible and more profitable.

[http://download.mckinseyquarterly.com/web_services.pdf]

13 Cloud Computing

This session will discuss: what is cloud computing and its origins and technologies. Discussion of some of the key vendors in this space and applications of cloud computing, including Amazon Web Services, Google App Engine, Salesforce.com, and Rackspace's.

- a) Ludwig Siegele, "Let it Rise; Special Report on Cloud Computing," The Economist, Vol.389, Issue 8603, Oct 25, 2008, 16 pages.

Information technology is turning into a global "cloud" accessible from anywhere. This Special Report contains several short articles that discuss what it means for the way people conduct business.

[<http://www.economist.com/surveys/downloadSurveyPDF.cfm?id=12446057&surveycode=NA&submit=View+PDF> contains all the articles in one PDF file or

http://www.economist.com/specialreports/displayStory.cfm?story_id=12411882 to get first article and then link to get the subsequent articles]

WEB 2.x EXAMPLES

14 Component Examples, OpenAPIs, and Advanced Mashups

Web services, OpenAPIs, and other Web 2.x technologies provide capabilities for much more advanced mashups, but they also entail a need to understand the interdependencies and risks created.

- a) Urs Gasser, John G. Palfrey Jr., "Case Study: Mashups Interoperability and eInnovation," Harvard University - Berkman Center for Internet & Society, Research Publication No. 2007-10, November 2007, 36 pages.

Mashups are an area of enormous innovation that is manifested through new business models, new technologies, and clever new ways to use and share data. The focus of this case study is the relationship between innovation in Web services applications and their interoperability (or interoperability potential). This paper discusses several options for creating greater sustainability over time, such as license interoperability, open standards, and back-up in the form of traditional law enforcement.

[<http://ssrn.com/abstract=1033232>]

15 Collaboration Examples

Guest speaker: Satwik Seshai (IBM). Email, IM and have widely reduced the use of paper mail, travel and phone as collaboration tool, but they have not fundamentally changed how people work together. Novel technologies, such as online workspaces, wikis, and search can fundamentally change how team can work together and increase productivity.

- a) Thomas P. Moran, Alex Cozzi, Stephen P. Farrell, "Unified activity management: supporting people in e-business", Communications of the ACM, Vol 48, Issue 12, Dec. 2005, 67-70.

Meshing formal business processes with informal human collaborations is needed to support business activities. Most knowledge work is collaborative, informal, and situationally adaptive. When business activities require support that does not inhibit its informal and locally adaptive nature, it is called Unified Activity Management (UAM).

[Go to <http://libraries.mit.edu/vera> Select Exact Search for "Communications of the ACM" and choose "Full text - ACM Digital Library", then select "December 2005" and go to the article]

- b) Jonathan Chan, Glynn Rogers, Darwin Agahari, David Moreland, John Zic, "Enterprise Collaborative Contexts and their Provisioning for Secure Managed Extranets," Proceedings of the IEEE International Workshops on Enabling Technologies: Infrastructure for Collaborative Enterprises (WETICE'06), June 2006, pp.:313-318.

This paper describes research into secure managed extranets, motivated by the requirements of companies (possibly competitors) needing to collaborate on occasion. There are two requirements addressed: (i) a service-construct abstraction based on what they term a 'Collaborative Context' where authorized participants (e.g. project leaders) have collective provisioning capabilities for the purpose of negotiating and contributing exclusive resources to create a virtual private enterprise, and (ii) a realization of the collaborative context as a commercially oriented, on-demand Virtual Private eXtranet Service (VPXS).

[Go to <http://libraries.mit.edu/vera> Select Exact Search for "IEEE Xplore" and do a basic search for the article by title "Enterprise Collaborative Contexts."]

- c) Antone Gonsalves, "IBM Opens 'Bluehouse' For Cloud-Based Social Networking," InformationWeek, October 6, 2008, 2 pages.

The article describes how IBM ties together parts of its Lotus, Rational, and Tivoli software to appeal to SMBs and departments in larger corporations, because of the minimal up-front costs and maintenance.

[<http://www.informationweek.com/shared/printableArticle.jhtml?articleID=210700289>]

WEB 3.0

16 Introduction to Web 3.0 & Semantic web concept

Discussion of the long-term vision of the "data web" and "semantic web."

Explanation of the Semantic Web "Layer Cake" of technologies.

WEB 3.0 TECHNOLOGIES

17 Semantic Web

Guest speaker (tentative): Tim Berners-Lee (MIT and World Wide Web Consortium – W3C).

The Semantic Web is an evolving extension of the World Wide Web in which the semantics of information and services on the web is defined, making it possible for the web to understand and satisfy the requests of people and machines to use the web content. It derives from Tim Berners-Lee's vision of the Web as a universal medium for data, information, and knowledge exchange.

- a) Tim Berners-Lee, James Hendler, and Ora Lassila, "The Semantic Web: A new form of Web content that is meaningful to computers will unleash a revolution of new possibilities," Scientific American, Vol. 284 Issue 5, May 2001, pp. 34-43.

This is the seminal paper when Tim Berner-Lee first introduced the notion of the "semantic web."

[http://www.ryerson.ca/~dgrimsha/courses/cps720_02/resources/Scientific%20American%20The%20Semantic%20Web.htm or, for a slightly longer version, Go to <http://libraries.mit.edu/vera> Do Exact Search on "Scientific American", select "Full text - EBSCOhost Business Source Complete," choose year 2001, then month May 2001, and go to paper #21.]

18 Semantic Representation: Ontology Languages

An “ontology” is a representation of “what exists” and is based on the meaning from traditional philosophy. In the Semantic Web, there are ontology languages such as RDF and OWL.

19 Semantic Reasoning

Although semantic representation provides meanings, it is semantic reasoning that makes that knowledge useful. In this session, a particular application – information integration – is presented and semantic reasoning techniques developed at MIT are presented.

- a) Hongwei Zhu and Stuart Madnick, “Scalable Interoperability Through the Use of COIN Lightweight Ontology,” *ODBIS 2005/2006*, (M. Collard (Ed.), LNCS 4623, published by Springer-Verlag Berlin Heidelberg, 2007, pp. 37–50.

There are many different kinds of ontologies, from lightweight ontologies to formal ontologies. This paper compares and contrasts the lightweight and formal ontology approaches to data interoperability. It also provides a structure for context descriptions. The structure can be exploited to facilitate semantic reasoning for automatic composition of context mappings. This mechanism leads to a scalable solution to semantic interoperability among disparate data sources and contexts.

[<http://web.mit.edu/smadnick/www/wp/2007-13.pdf>]

- b) Hongwei Zhu and Stuart Madnick, “Improving Data Quality Through Effective Use of Data Semantics”, *Data & Knowledge Engineering*, Vol. 59, Issue 2, 2006, pp. 460-476.

Data quality issues have taken on increasing importance in recent years, especially when integrating information from multiple sources. This paper notes that many “data quality” problems are actually “data misinterpretation” problems – that is, problems caused by heterogeneous data semantics, especially the issue of aggregational ontological heterogeneity, which concerns how complex entities and their relationships are aggregated. It is shown how the MIT COIN technology can be used to capture data semantics and apply semantic reasoning to reconcile semantic heterogeneities, thereby improving data quality.

[Free pre-print version available from <http://ssrn.com/abstract=825650>]

WEB 3.0 APPLICATIONS & IMPACTS ON MANAGEMENT

20 Web 3.0 Applications

To be filled in ...

21 Web 3.0 Impacts on Management

To be filled in ...

STUDENT PRESENTATIONS

22 Student Presentations

Presentations of selected student term projects