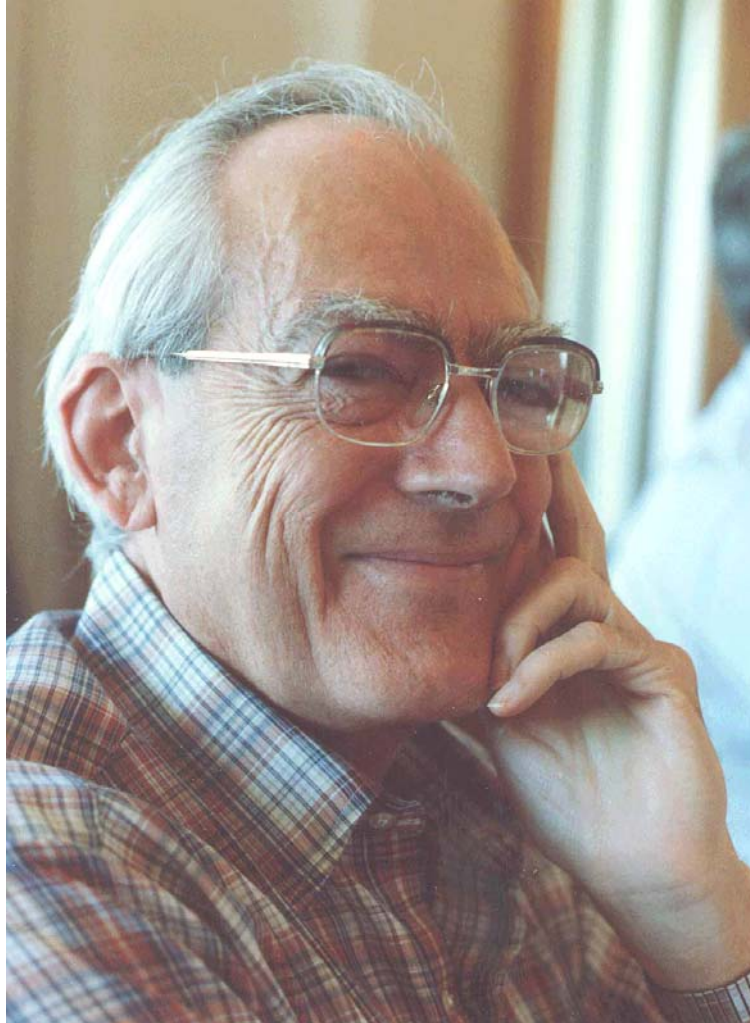


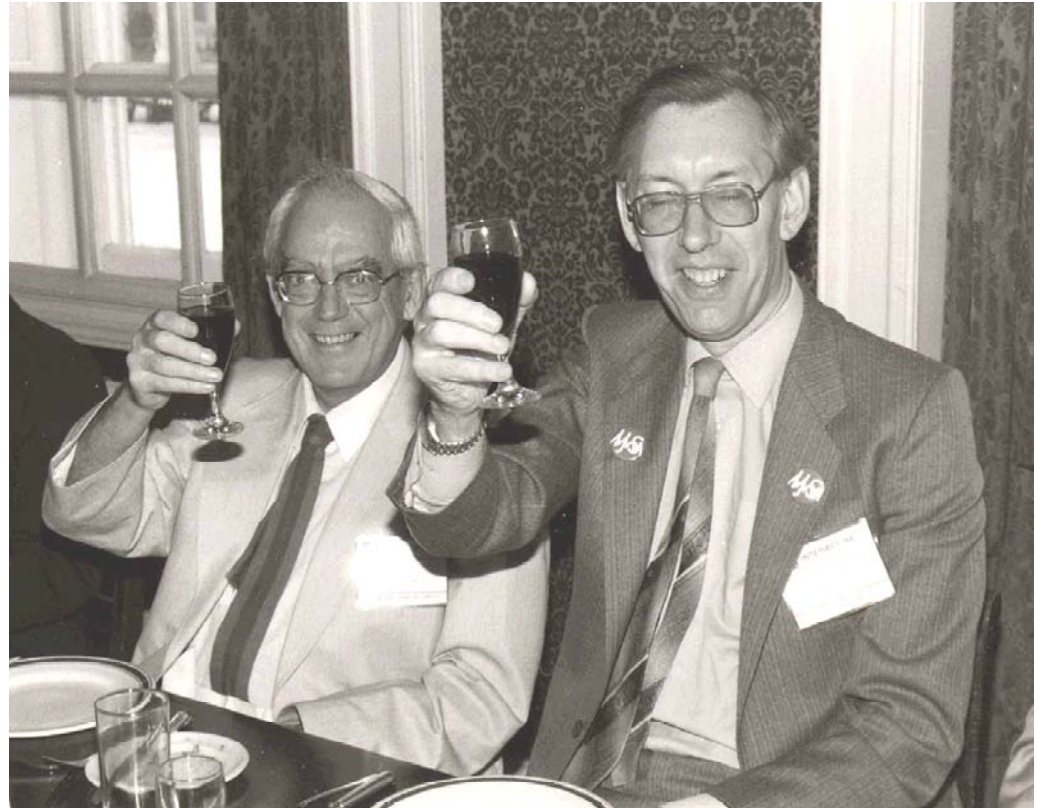


# **Tribute to Brian Shackel**

# Brian Shackel (1927-2007)



**HCII - Honolulu 1987**



**INTERACT - London 1984**



# Human Values for Shaping the Made World

Ben Shneiderman *ben@cs.umd.edu*

Founding Director (1983-2000), Human-Computer Interaction Lab  
Department of Computer Science &  
Institute for Advanced Computer Studies



UNIVERSITY OF  
MARYLAND





Interdisciplinary research community

- Computer Science & Info Studies
- Psych, Socio, Poli Sci & MITH

([www.cs.umd.edu/hcil](http://www.cs.umd.edu/hcil))

# Design Issues

- Input devices & strategies
  - Keyboards, pointing devices, voice
  - Direct manipulation
  - Menus, forms, commands
- Output devices & formats
  - Screens, windows, color, sound
  - Text, tables, graphics
  - Instructions, messages, help
- Collaboration & communities
- Manuals, tutorials, training



[www.awl.com/DTUI](http://www.awl.com/DTUI)

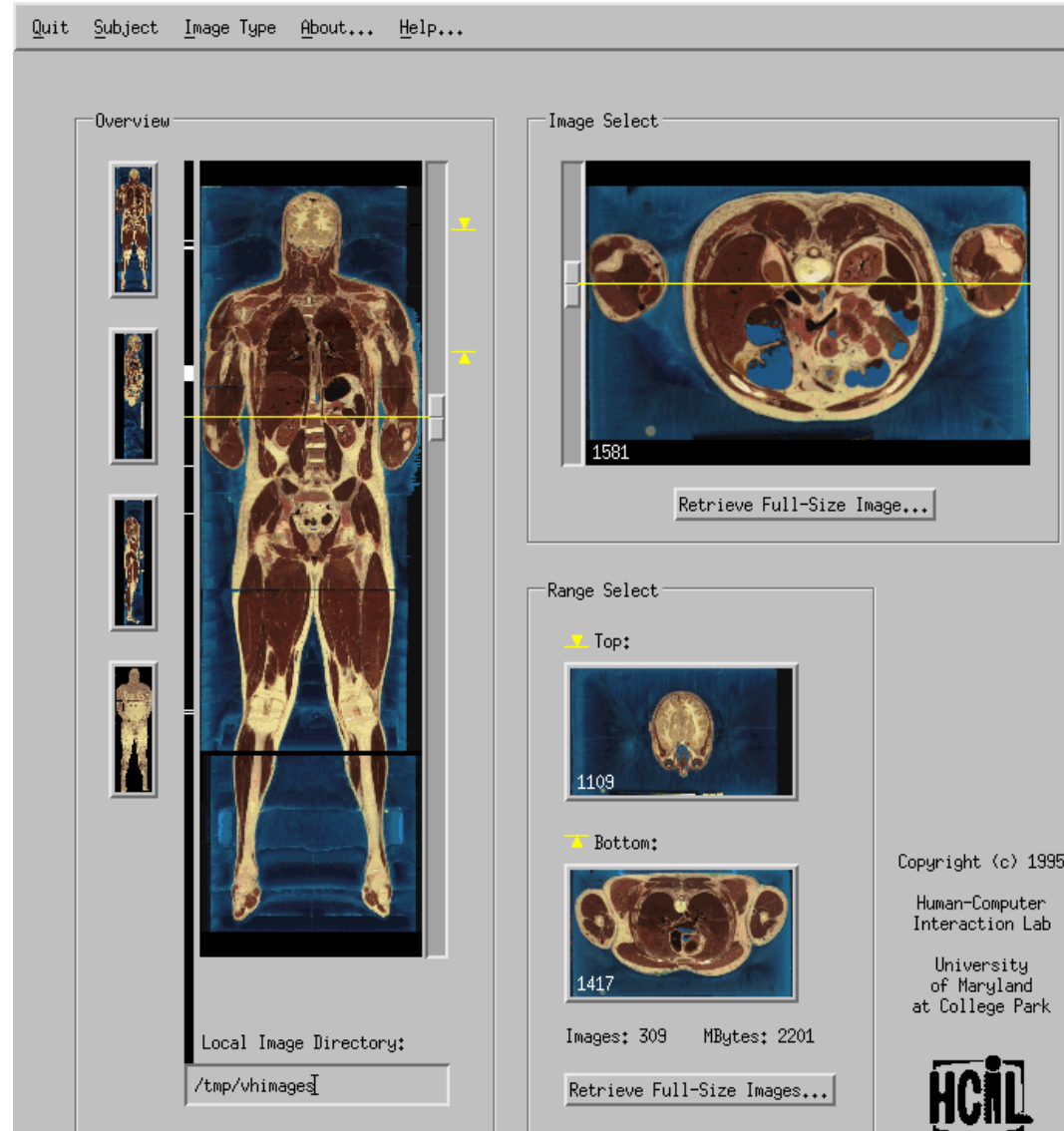
# U.S. Library of Congress



- Scholars, Journalists, Citizens
- Teachers, Students

# Visible Human Explorer (NLM)

- Doctors
- Surgeons
- Researchers
- Students





# NASA Environmental Data

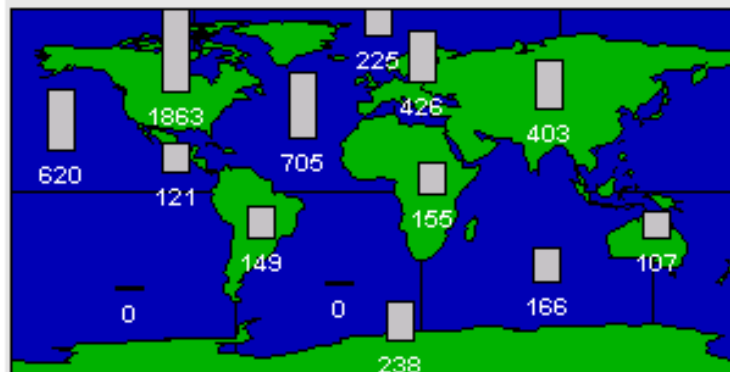
- Scientists
- Farmers
- Land planners
- Students



## Global Change Master Directory

Query Preview

### Area Selection:



Select attributes of in  
by clicking on map and

### Topic Selection:

Atmosphere	2151
Biosphere	1083
Cryosphere	313
Human Dimensions	595
Hydrosphere	643
Land Surface	802
Oceans	1321
Paleoclimate	120
Radiance Or Imagery	738
Solar Physics	113
Solid Earth	429
Not Specified	0

### Year Selection:

Prehistoric	0
0001 - 1699	21
1700 - 1799	51
1800 - 1849	91
1850 - 1899	283
1900 - 1929	409
1930 - 1939	415
1940 - 1949	498
1950 - 1959	711
1960 - 1969	978
1970 - 1979	1649
1980 - 1989	2445
1990 - 1999	2391
Not Specified	644



# NSF Digital Government Initiative

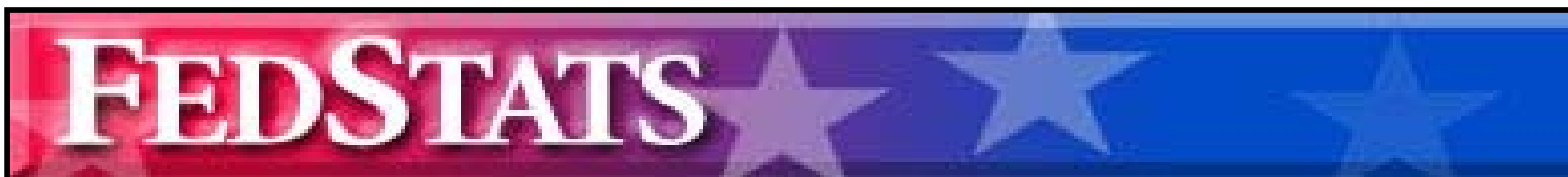


Census,  
NCHS,  
BLS, EIA,  
NASS, SSA

- Find what you need
- Understand what you Find



[www.ils.unc.edu/govstat/](http://www.ils.unc.edu/govstat/)



# International Children's Digital Library



## INTERNATIONAL CHILDREN'S DIGITAL LIBRARY

A Library for the World's Children

[Read books!](#)

[About us](#)

[Sponsors](#)

[How to contribute](#)

[Need help?](#)

### QUICK LINKS

[myICDL Account](#)

• [Register / Sign in](#)

• [Select language](#)

For first-time visitors

• [Mission & summary](#)

• [General FAQ](#)

For returning visitors

• [Recently added books](#)

For book contributors

• [Contribute books](#)

• [Policies and statements](#)

• [Scanning instructions](#)

For researchers

• [Fast facts](#)

• [Papers](#)

• [Presentations](#)

For volunteers

• [ICDL Ambassadors](#)

• [Translators](#)



Simple search



Location search

### Our Mission

We are a library that provides free access to children's books from around the world. By ensuring access to books from many cultures and in diverse languages, we foster a love of reading, a readiness to learn, and a response to the challenges of world illiteracy.

We invite you to [explore our growing library](#) and learn how you can [contribute to our efforts](#).

### FEATURED BOOKS

Colorful illustrations with Jeanette Marin

**May 8, 2006** Selected by Jeanette Marin, a student at the University of Maryland. Jeanette has three daughters



### Simple Search

[Home](#) > [Read books!](#) > Simple Search



Rainbow Covers



Red Covers



Orange Covers



Yellow Covers



Green Covers

= 16 books



[Aliou et Jean](#)  
French



[The amazing adventures of...](#)  
French



[The baby's doll](#)  
French



[A big little girl](#)  
French



[Collection of 160 prints o...](#)  
French



[I'll be a stuntman!](#)  
French



Three to Five



Six to Nine



Ten to Thirteen



Make Believe Books



True Books



Short Books



Medium Books



Long Books



Recently Added  
Books



Award Winn  
Books

Keywords  in

[www.childrenslibrary.org](http://www.childrenslibrary.org)

# Trusted Voting Technologies

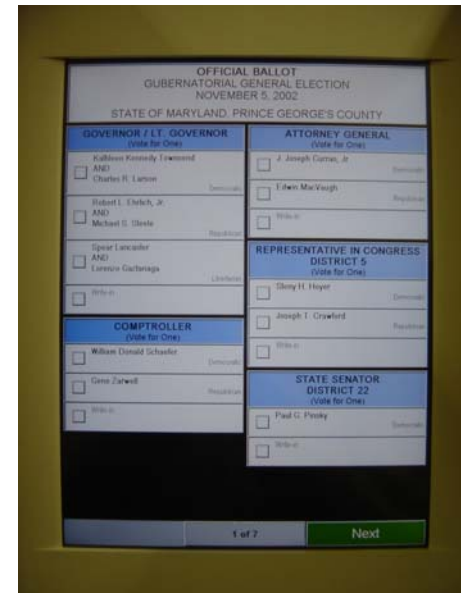
- **Accurate, fast & trusted voting**

- Complex ballots
- Support recounts
- Accommodate disabilities
- Control font size, contrast & color
- Switch languages



- **Challenges**

- Must work for everybody
- Not frequently used
- Walk up and use
- No external help



# Home Medical Devices

- Bathroom scale
- Thermometer
- Blood pressure
- Diabetes: Glucose
- Asthma: Breath
- Fat monitor
- EKG

Home Diagnostics, Inc.  
Dedicated To Diabetes Management

 **Prestige**  
smart  
system

The Smart Choice™ for Diabetes Monitoring



**HOME**

**PRODUCTS**

**DIABETES INFORMATION**

**CUSTOMER SUPPORT**

**INSURANCE COVERAGE**

**ABOUT HDI**

**UPLOAD TEST RESULTS**

ESPECIALLY FOR ...

- ▶ **HEALTHCARE PROFESSIONALS**
- ▶ **PHARMACISTS**
- ▶ **BUSINESS PARTNERS**

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Home Diagnostics, Inc. (HDI) – a leader in diabetes management and blood glucose monitoring systems – helps millions of people with diabetes enjoy a better life.

Featuring the Prestige Smart System.™

an unmatched combination of

**accuracy**

It's The Smart Choice™ for Diabetes Monitoring.

[SITE MAP](#) | [CONTACT US](#) | [WARRANTY REGISTRATION](#) | [DISCLAIMER](#)  
© 2003 Home Diagnostics, Inc. All rights reserved.



**WHAT'S NEW**

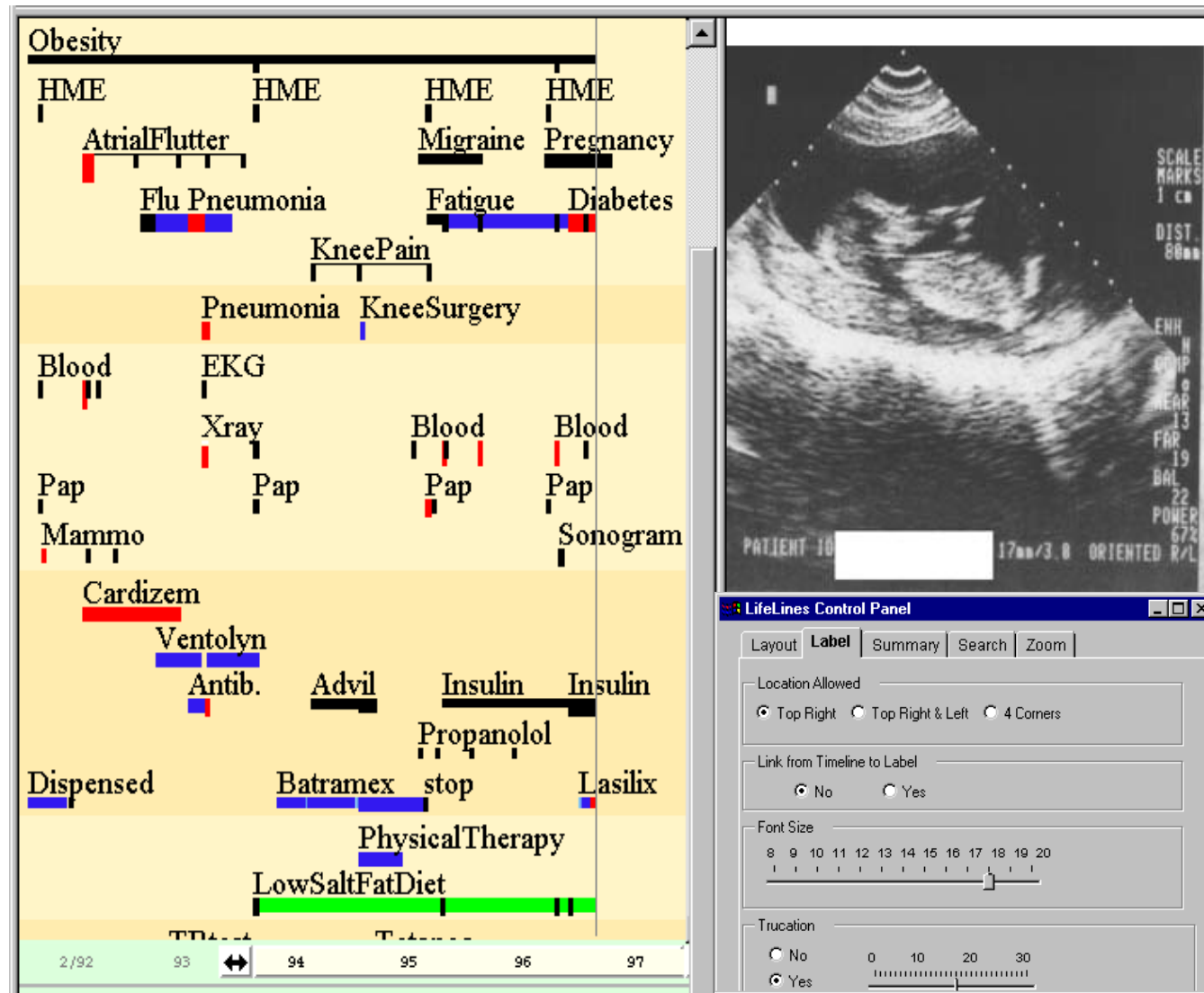
Save up to 40% on Prestige Smart System™ Test Strips. Now require less blood.

Clinical Studies prove Prestige IQ™ Blood Glucose Monitor is accurate and easy.

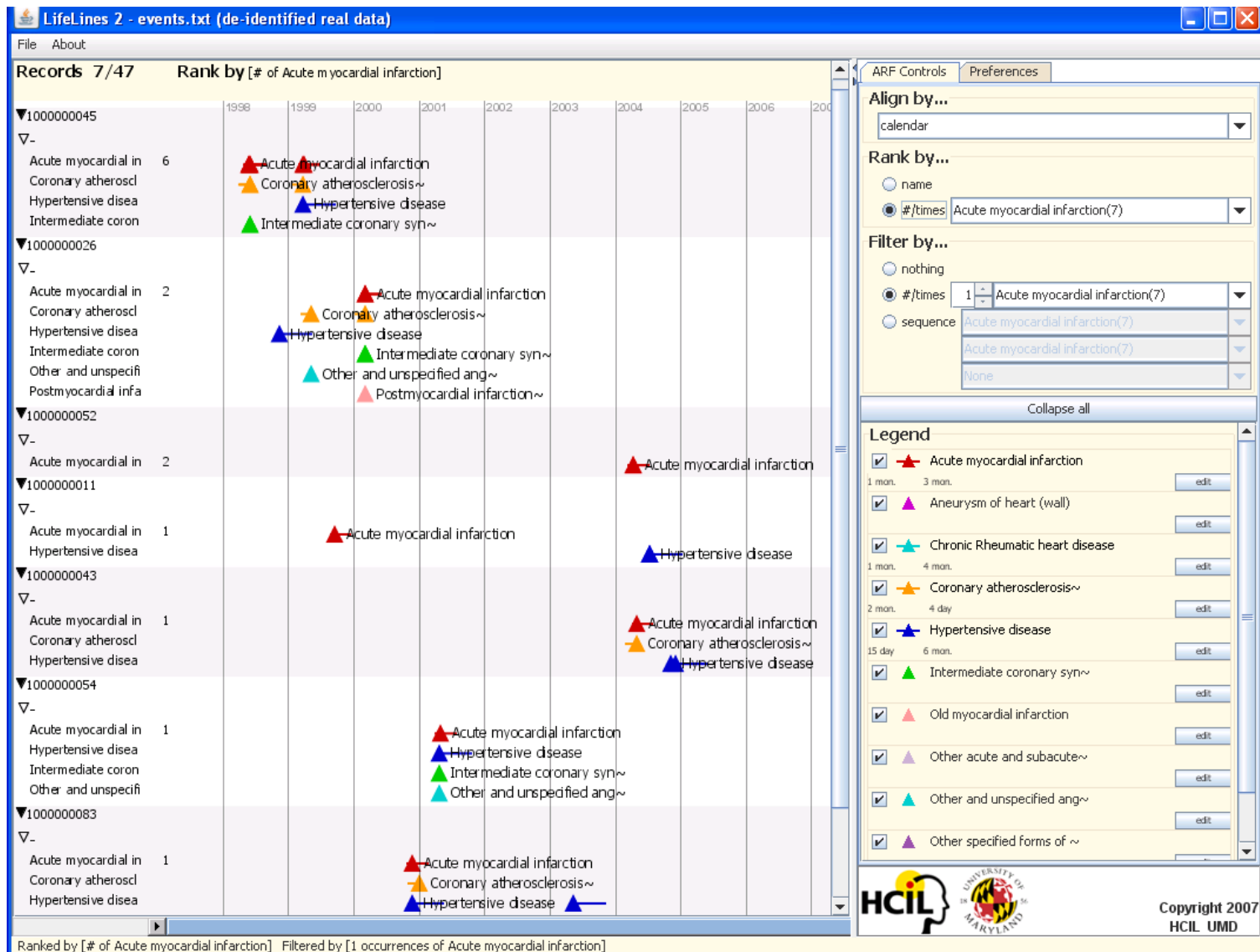
New Educational Brochures help you manage your diabetes.

[Recipe of the month](#) - it's delicious!

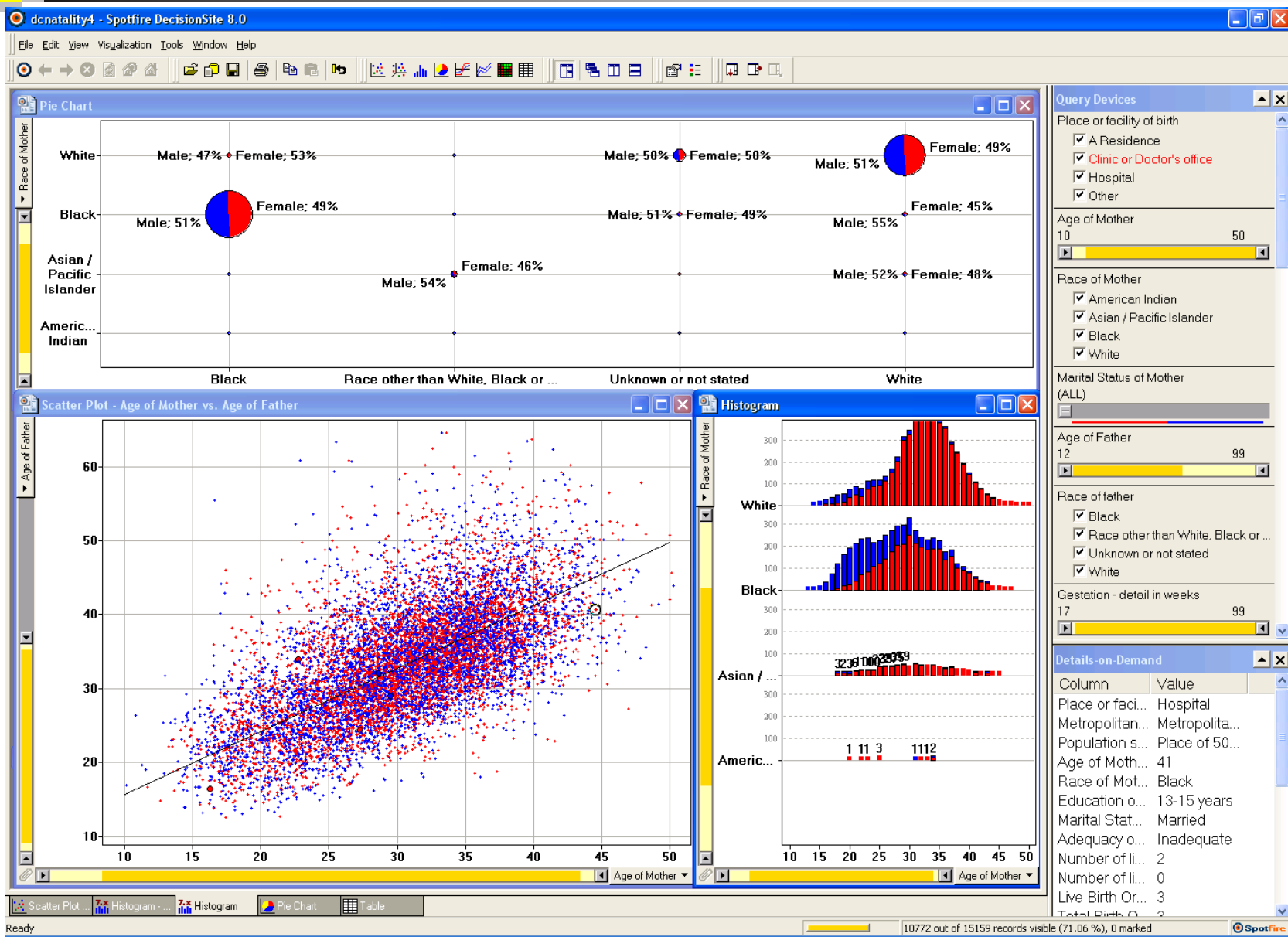
# Electronic Health Records: LifeLines



# Electronic Health Records: LifeLines 2.0

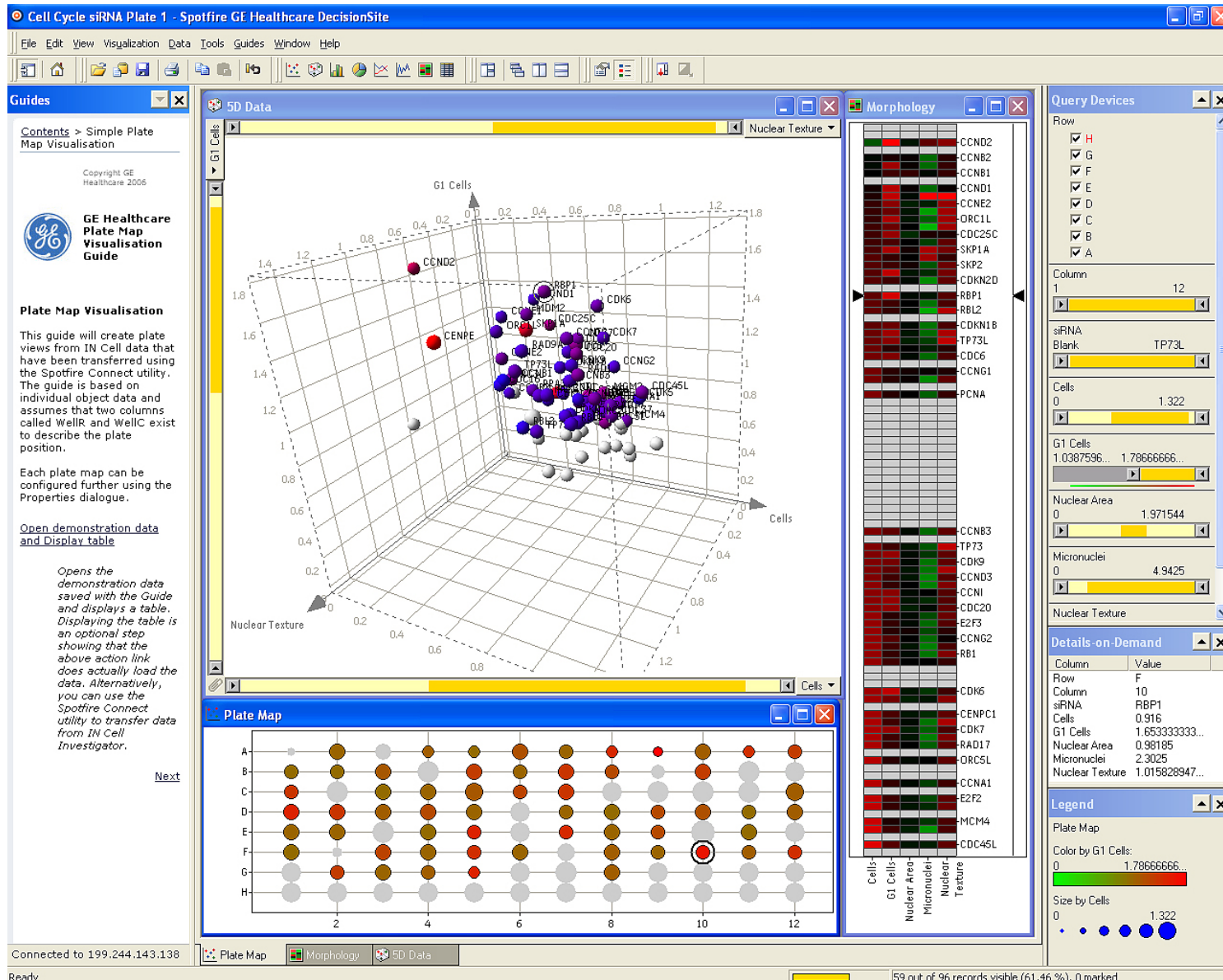


# Spotfire DC natality data





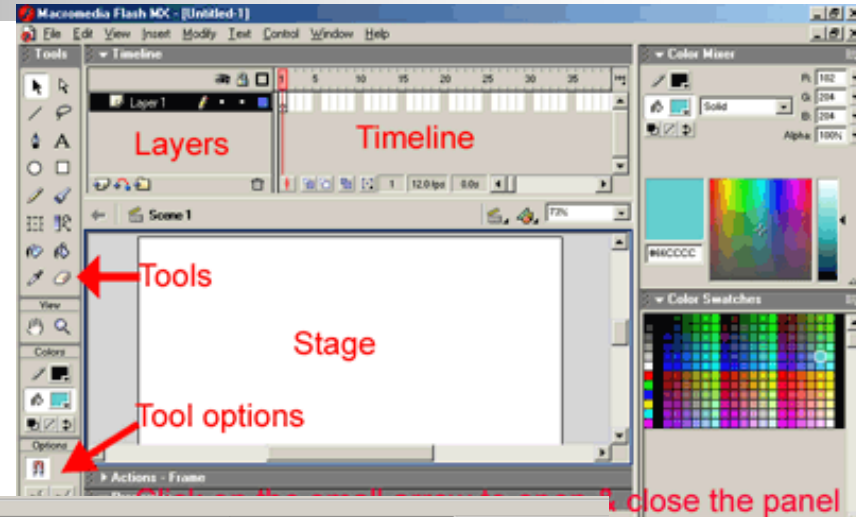
# RBP1 (retinol binding) → embryos & vision





# Creativity Support Tools

More people,  
More creative,  
More often

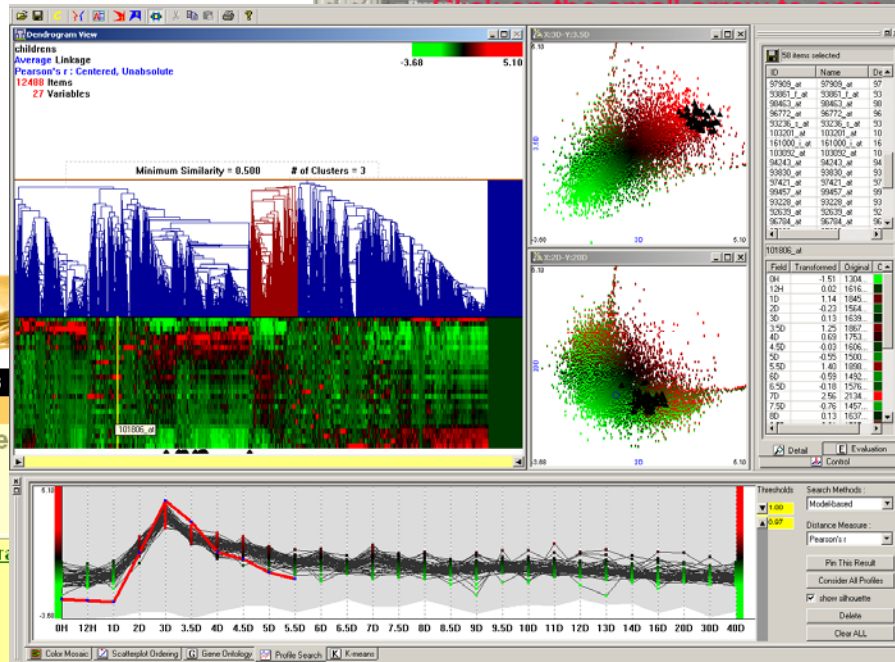


SSI Store  
Comparison Chart  
10 Reasons

Dramatica Pro 4.0 vs. Writer's DreamKit 4.0

Feature Comparison Chart

Writer's DreamKit 4.0



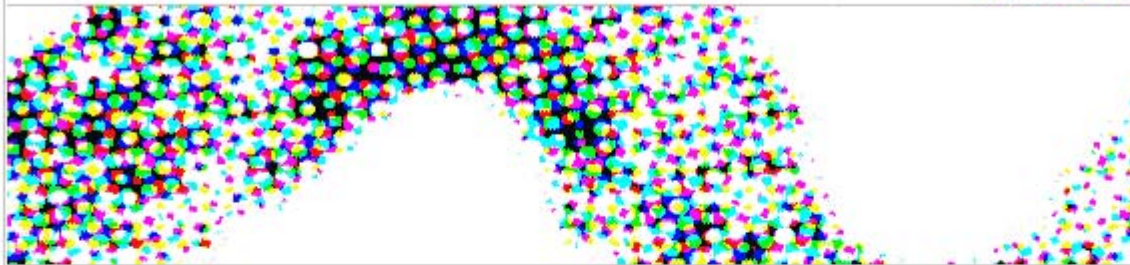


# CC2007

## 6th Creativity & Cognition Conference

Seeding Creativity: Tools, Media, and Environments

June 13-15, 2007, Washington, DC USA



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Submissions

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Art Exhibition

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### CREATIVITY & COGNITION 2007

#### ABOUT CC2007

The *Creativity & Cognition Conference* series began in 1993 and has evolved into a lively multidisciplinary event combining research and practice. Rigorous research is expanding as theoretic foundations are emerging and goals become more well-defined. Successful practice manifests itself in a growing array of creativity support tools for discovery and composition by software and other engineers, diverse scientists, product and graphic designers, architects, new media artists, musicians, educators, students, and many others. We believe that deeper understanding of creative processes and improved support tools can make more people more creative more of the time.

*Creativity & Cognition 2007 is focused on theme of cultivating and*

#### Links

[Flyer](#) (TIFF file)

[Announcement](#) (PPT file, 286K)

#### Previous Conferences

[Creativity & Cognition Studios](#)

#### Papers Archive

[ACM Digital Library](#)

#### Related Events

U.S. National Science Foundation  
workshops on [Creativity Support Tools](#) and

<http://www.cs.umd.edu/hcil/CC2007/>



# HCI Challenges



- **Information Access**
- **Universal Usability**
- **Trusted Voting**
- **Healthcare**
- **Information Visualization**
- **Creativity Support Tools**

# HCI Challenges



- **Information Access**
- **Universal Usability**
- **Trusted Voting**
- **Healthcare**
- **Information Visualization**
- **Creativity Support Tools**
- **Environmental Sustainability**
- **Emergency/Disaster Response**
- **Web Science**
- **International Development**



# UN Millennium Development Goals

**keep the promise**  
Millennium Development Goals



HOME | BACKGROUND | DOCUMENTS | NEWSROOM | WEBCAST | RELATED SITES

## The Goals

- 1** Eradicate extreme poverty and hunger
- 2** Achieve universal primary education
- 3** Promote gender equality and empower women
- 4** Reduce child mortality
- 5** Improve maternal health
- 6** Combat HIV/AIDS, malaria and other diseases
- 7** Ensure environmental sustainability
- 8** Develop a global partnership for development

## What are the Millennium Development Goals?

The eight Millennium Development Goals (MDGs) – which range from halving extreme poverty to halting the spread of HIV/AIDS and providing universal primary education, all by the target date of 2015 – form a blueprint agreed to by all the world's countries and all the world's leading development institutions. They have galvanized unprecedented efforts to meet the needs of the world's poorest.

"We will have time to reach the Millennium Development Goals – worldwide and in most, or even all, individual countries – but only if we break with business as usual. We cannot win overnight. Success will require sustained action across the entire decade between now and the deadline. It takes time to train the teachers, nurses and engineers; to build the roads, schools and hospitals; to grow the small and large businesses able to create the jobs and income needed. So we must start now. And we must more than double global development assistance

## NEWS FLASH

[Millennium Development Goals Report 2006](#)

## UN ACTION

[2005 World Summit United Nations Headquarters, NY](#)  
14-16 September 2005

[Millennium Project](#)

[World Summit outcome](#)

[Millennium Development Goals: Civil Society Takes Action](#)  
58th Annual  
DPI/NGO Conference,  
7-9 September 2005, NY

[Regional Reports](#)

[Economic and Social](#)



# Interdisciplinary Challenges



- Modern problems are complex
- Solutions require multiple disciplines
- Laboratory studies have limited relevance
- Natural sciences are not sufficient

# Science 1.0



- Reductionist
- Controlled Experiments
- Replicability
- Laboratory

# Science 1.0

+

# Science 2.0

- |                          |   |              |
|--------------------------|---|--------------|
| • Reductionist           | → | Integrated   |
| • Controlled Experiments | → | Case Studies |
| • Replicability          | → | Validity     |
| • Laboratory             | → | Situated     |

# Science 2.0 Emerges



Interdisciplinary study of the made world

Socially embedded

Bringing closer together

- theory & practice
- basic & applied research

New research directions

(Emerson, Dewey, James, Vygotsky,  
Simon, Suchman, Nardi, ...  
... and many of you!)

# Science 2.0 Evaluation Methods



## **Ethnographic Observational Situated**

- Multi-Dimensional
- In-depth
- Long-term
- Case studies

# Science 2.0 Evaluation Methods



## **Ethnographic Observational Situated**

- Multi-Dimensional
- In-depth
- Long-term
- Case studies

Domain Experts & Communities  
Doing Their Own Work  
for Weeks & Months

# Science 2.0 Evaluation Methods



## Ethnographic Observational Situated

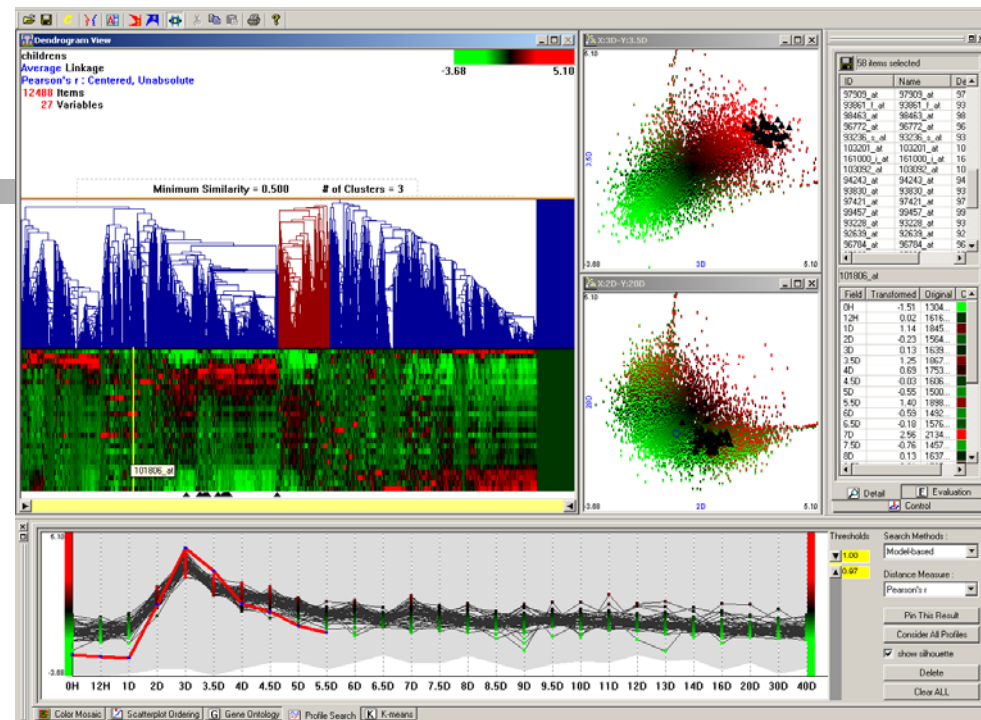
- Multi-Dimensional
- In-depth
- Long-term
- Case studies

# MILCs



# MILC example

- Evaluate Hierarchical Clustering Explorer

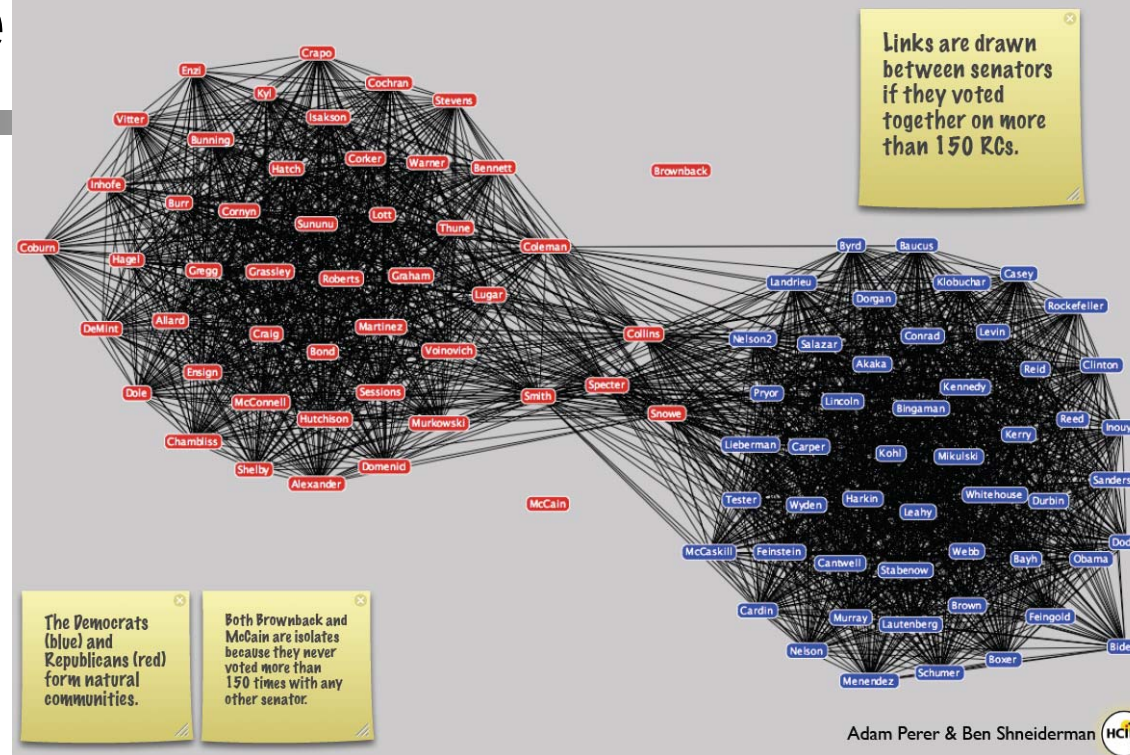


- Focused on rank-by-feature framework
- 3 case studies, 4-8 weeks  
(molecular biologist, statistician, meteorologist)
- 57 email surveys
- Identified problems early, gave strong positive feedback about benefits of rank-by-feature

# MILC example

## Senatorial Social Network

- Evaluate SocialAction



- Focused on integrating statistics & visualization
- 4 case studies, 4-8 weeks (journalist, bibliometrician, terrorist analyst, organizational analyst)
- Identified desired features, gave strong positive feedback about benefits of integration

# Case Study Methodology



- 1) Interview (1 hr)
- 2) Training (2 hr)
- 3) Early Use (2-4 weeks)
- 4) Mature Use (2-4 weeks)
- 5) Outcome (1 hr)

# Short Range Goals



- Validate benefits of new designs
- Collect evidence to support/reject hypothesis
  - rank-by-feature
  - integrating statistics & visualization
- Rapid refinements of tools
- Benefits to users

# Long Range Goals



- **Harness Collaboration**
  - Pair-wise
  - Small Team
  - Larger Group
  - Social Creativity

# Long Range Goals



- **Harness Collaboration**

- Pair-wise
- Small Team
- Larger Group
- Social Creativity

**Thomas Edison:**

**1% Inspiration, 99% Perspiration**

# Long Range Goals



- **Harness Collaboration**

- Pair-wise
- Small Team
- Larger Group
- Social Creativity

**Thomas Edison 2.0:**

**1% Inspiration, 99% Collaboration**

# Long Range Goals



- **Understand dynamics of**
  - Trust
  - Empathy
  - Responsibility
  - Privacy
  - Etc.



# Social Creativity



- Open Source, LINUX
- Wikipedia, Citizendium, Wikia
- Citizen Journalism, Democracy NOW
- Facebook, LinkedIn, MySpace
- Flickr, YouTube, Digg, del.icio.us
- Second Life, World of Warcraft
- Google Map Mashups (Chicago Crime)



# Democracy NOW

..... INDEPENDENT, UNEMBEDDED MEDIA ..... THE EXCEPTION TO THE RULERS ..... BREAKING THE SOUND BARRIER .....

# DEMOCRACY NOW!

A daily radio and TV news program on over 500 stations, pioneering the largest community media collaboration in the U.S.

**DONATE to DN!**

HOME ABOUT US STATIONS STORE GET INVOLVED DONATE CONTACT

Daily Digest sign-up

Enter Email

Suscribase al boletín diario en español

**ARCHIVES**

Search for

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Browse archives by date

Find radio and TV stations in your local area that air Democracy Now!

Independent Media is more important than ever



Complete debate between Fmr. Israeli

## THE WAR & PEACE REPORT . . .

Hosted by award-winning journalists Amy Goodman and Juan Gonzalez

► Tuesday, September 11th, 2007: Listen/Watch entire show.  
[Click here to buy today's show at our online store.](#)

### TODAY'S SHOW

Headlines for September 11, 2007

- Gen. Petraeus, Crocker Urge More Time for "Surge"
- Admin Seeks Advisor to Guide Iraqis on Oil Law
- GOP-Linked Oil Firm Inks Oil Deal in Northern Iraq
- 69 Israeli Troops Wounded in Palestinian Rocket Attack
- Indonesian Court Orders Time to Pay Suharto Damages
- Admin Wrongly Let Insurance Companies Keep Medicare Payments
- Study: Polar Bears Face Extinction Over 50 Years
- U.S. OK'd Exports of Unsafe Products
- 9/11 Commemorations Mark 6 Years Since Attacks

### Los Titulares de Hoy: Democracy Now!'s daily news summary translated into Spanish



**Petraeus Praises "Surge" Results, Warns Against Quick Withdrawal From Iraq**

General David Petraeus, President Bush's top war commander in Iraq, testified Monday in what has been described as the most anticipated Congressional testimony by a general since the Vietnam War. He praised the results of the so-called surge and called for current U.S. troop levels to continue well into next year. We play excerpts of the hearing and get reaction from journalist Rick Rowley. [includes rush transcript]

**DN! seeks Mini Macs**  
[Click for details](#)

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Jobs & Internships

**Static paperback is out!**



AMY GOODMAN ... DAVID GOODMAN

**STATIC**

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- 9/08: San Francisco
- 9/10: New York, NY
- 9/15: Fort Collins, CO
- 9/15: Denver, CO
- 9/17: New York, NY
- 9/28: Seattle, WA



# Chicago Crime

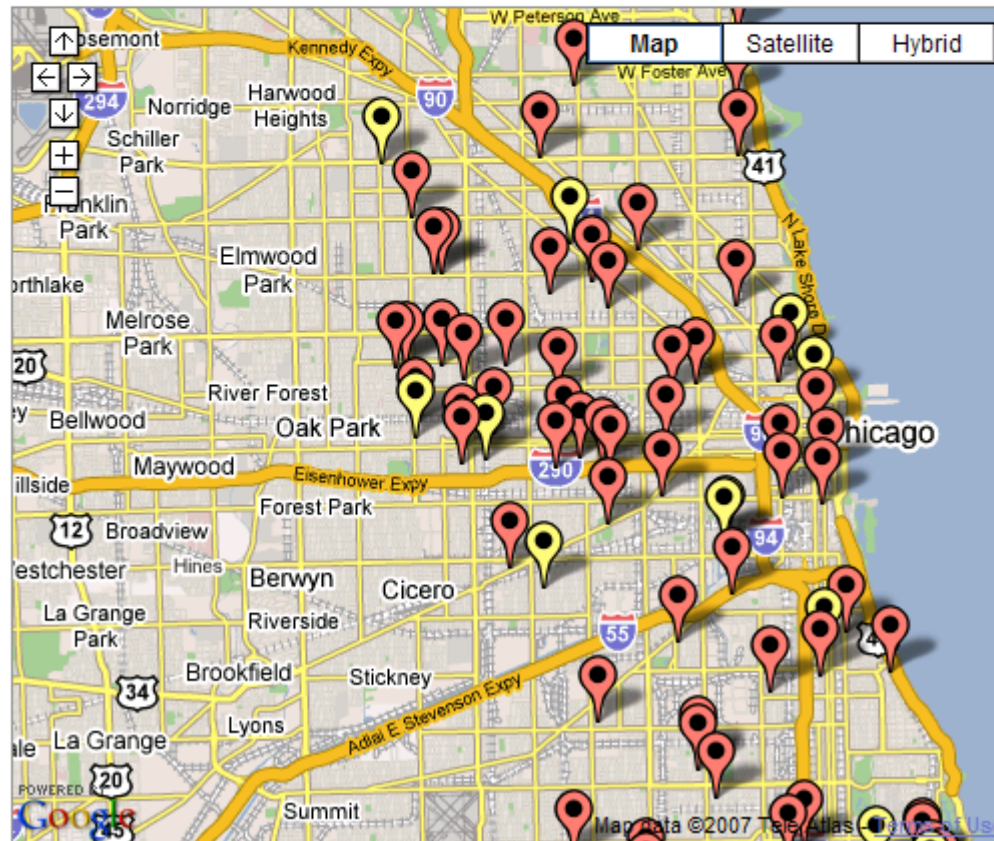
CHICAGOCRIME.ORG AV  
4200 N

A freely browsable database of  
crimes reported in Chicago.

Browse by: [Crime type](#) · [Street](#) · [Date](#) · [Police district](#) · [ZIP code](#) · [Ward](#) · [Location](#) · [Route](#) · [City map](#)

## Crime map

More than 100 crimes were found -- only the latest 100 are displayed. Narrow the list using the choices below.



## Filter crimes

All locations

Assault

All districts

Nov. 2, 2005 to Aug. 29, 2007

Midnight to Next midnight

Update map

## Crime classifications key

- Person
- Person (domestic)
- Property
- Property (domestic)
- Society
- Society (domestic)

# Wikideedia



- Role Models & Inspirations
  - Make good deeds visible
  - Everyone is a role model
  - Tell stories to celebrate local heroes
  - Encourage generalized reciprocity
  - Build community efficacy & social capital

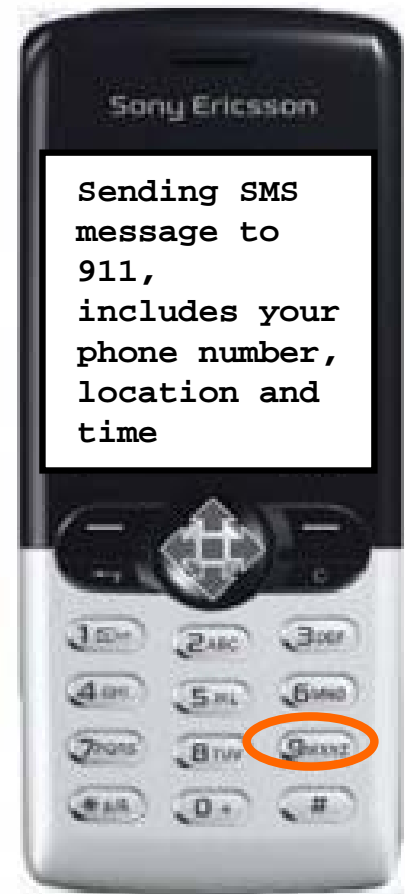
# World Wide Med



- Emergency care network (secure/private)
- If you are brought to an emergency room anywhere in the world, in 15 seconds your records are on screen in the local language
- Lab tests, images, diagnoses added
- Consultation supported with one click

# 911.gov: Community Response Grids

- Emergency/Disaster Response
  - Reporting incidents
  - Disseminating information
  - Resident-to-resident assistance

The screenshot shows the 911.Gov Community Response Grid website. The header is purple with the Maryland state flag and the text "911.Gov Community Response Grid". A left sidebar contains navigation links: Home, Report Emergencies, Offer Help, Past Events, Training & Resources, Discussion Forum, and a text size/español section. The main content area is titled "Report Emergencies" and features buttons for "Major Accidents", "Natural Disasters", "Medical", "Threats", and "Other ...". A map of the current neighborhood is shown, along with household and registered contact information. The footer includes links for About, Privacy, and Contacts, and a copyright notice for the University of Maryland.

**911.Gov Community Response Grid**

**Report Emergencies**

**Major Accidents**  
Vehicle, Equipment, building collapse ...

**Natural Disasters**  
Tornado, Flood, Extreme heat/cold ...

**Medical**  
Influenza, Air quality, Food poisoning ...

**Threats**  
Biological, Chemical, Nuclear, Radiation ...

**Other ...**

**Your neighborhood now**

**Your household:**  
4321 Maple Ave.,  
College Park, MD

**Registered with:**

- Maple Condo Assn
- CP Parent-Teachers Assn

You have reported [2 emergencies](#)  
Your neighbors have reported [6 emergencies](#)  
You made [1 request](#) for help  
Your neighbors made [4 requests](#) for help

[About](#) | [Privacy](#) | [Contacts](#)

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# UN Millennium Development Goals

**keep the promise**  
Millennium Development Goals



HOME | BACKGROUND | DOCUMENTS | NEWSROOM | WEBCAST | RELATED SITES

## The Goals

- 1** Eradicate extreme poverty and hunger
- 2** Achieve universal primary education
- 3** Promote gender equality and empower women
- 4** Reduce child mortality
- 5** Improve maternal health
- 6** Combat HIV/AIDS, malaria and other diseases
- 7** Ensure environmental sustainability
- 8** Develop a global partnership for development

## What are the Millennium Development Goals?

The eight Millennium Development Goals (MDGs) – which range from halving extreme poverty to halting the spread of HIV/AIDS and providing universal primary education, all by the target date of 2015 – form a blueprint agreed to by all the world's countries and all the world's leading development institutions. They have galvanized unprecedented efforts to meet the needs of the world's poorest.

"We will have time to reach the Millennium Development Goals – worldwide and in most, or even all, individual countries – but only if we break with business as usual. We cannot win overnight. Success will require sustained action across the entire decade between now and the deadline. It takes time to train the teachers, nurses and engineers; to build the roads, schools and hospitals; to grow the small and large businesses able to create the jobs and income needed. So we must start now. And we must more than double global development assistance

## NEWS FLASH

[Millennium Development Goals Report 2006](#)

## UN ACTION

[2005 World Summit United Nations Headquarters, NY](#)  
14-16 September 2005

[Millennium Project](#)

[World Summit outcome](#)

[Millennium Development Goals: Civil Society Takes Action](#)  
58th Annual  
DPI/NGO Conference,  
7-9 September 2005, NY

[Regional Reports](#)

[Economic and Social](#)



# Science 1.0

+

# Science 2.0

- |                          |   |               |
|--------------------------|---|---------------|
| • Reductionist           | → | Integrated    |
| • Controlled Experiments | → | Case Studies  |
| • Replicability          | → | Validity      |
| • Laboratory             | → | Situated      |
| • Individual             | → | Collaboration |

# Promoting Science 2.0



- **Action Items**
  - **Educators:** Teach Science 2.0 evaluation methods
  - **Students:** Choose projects with high societal payoffs
  - **Researchers:** Employ Science 2.0 strategies
  - **Developers:** Focus on genuine user needs
  - **Managers:** Support ambitious visions
  - **Journalists:** Raise public expectations
  - **Policy makers:** Support Science 2.0 visions
  - **Funders:** Sponsor Science 2.0 projects

# Margaret Mead



Never doubt that a small and  
committed group of people  
can change the world.  
In fact, that is the only thing that ever has.

# Margaret Mead 2.0



Never doubt that a small and  
committed group of people  
can change the world.

In fact, that is the only thing that ever has.

Never doubt that a large and  
connected group of people  
can change the world.

In fact, it is our best hope for the future.



## **25<sup>th</sup> Annual Symposium**

### **May 30, 2008**

[www.cs.umd.edu/hcil](http://www.cs.umd.edu/hcil)



# Long Range Goals: Taking Responsibility



- World peace
- Medical & psychological care
- Adequate nutrition & housing
- Safe transportation
- Environmental protection
- Effective education
- Access to communication  
& information resources
- Freedom of expression
- Creative exploration
- Privacy protection
- Socially constructive  
entertainment & sports

# Long Range Goals: Taking **Action**

- World peace
  - Medical & psychological care
  - Adequate nutrition & housing
  - Safe transportation
  - Environmental protection
  - Effective education
  - Access to communication & information resources
  - Freedom of expression
  - Creative exploration
  - Privacy protection
  - Socially constructive entertainment & sports
- Reduce nuclear & conventional forces
  - Increase life expectancy
  - Slow population growth
  - Reduce homelessness
  - Reduce automobile accident deaths
  - Improve air quality in major cities
  - Reduce illiteracy
  - Reduce cost of communication & travel



# Enduring Values



- World peace
- Resolution of conflicts
- Medical and psychological health care
- Adequate nutrition and housing
- Safe transportation
- Protection of the environment
- Effective education
- Access to communication and information resources
- Freedom of expression
- Participation in community decisionmaking
- Support for creative exploration
- Privacy protection
- Socially constructive entertainment and sports

# Enduring Values



- Reduce nuclear and conventional forces
- Provide mechanisms for arbitration of conflict
- Facilitate access to expert opinions
- Simplify access to government services and officials
- Increase life expectancy
- Slow population growth
- Reduce homelessness
- Reduce automobile accident deaths
- Increase air quality in major cities
- Reduce illiteracy worldwide
- Develop job skills training
- Reduce the cost of communication and travel
- Provide easier access to art, music and literature

# UN Millennium Development Goals



To be achieved by 2015

- Eradicate extreme poverty and hunger
- Achieve universal primary education
- Promote gender equality and empower women
- Reduce child mortality
- Improve maternal health
- Combat HIV/AIDS, malaria and other diseases
- Ensure environmental sustainability
- Develop a global partnership for development