



caBIG™ In Vivo Imaging Workspace

Advanced Technology Consortium (ATC)

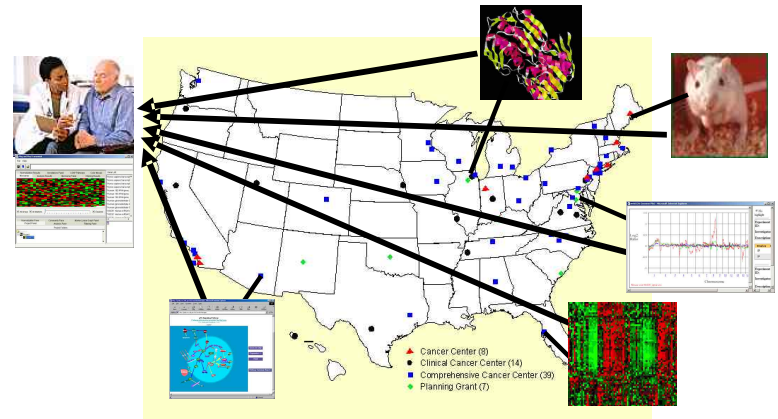
April 3, 2006





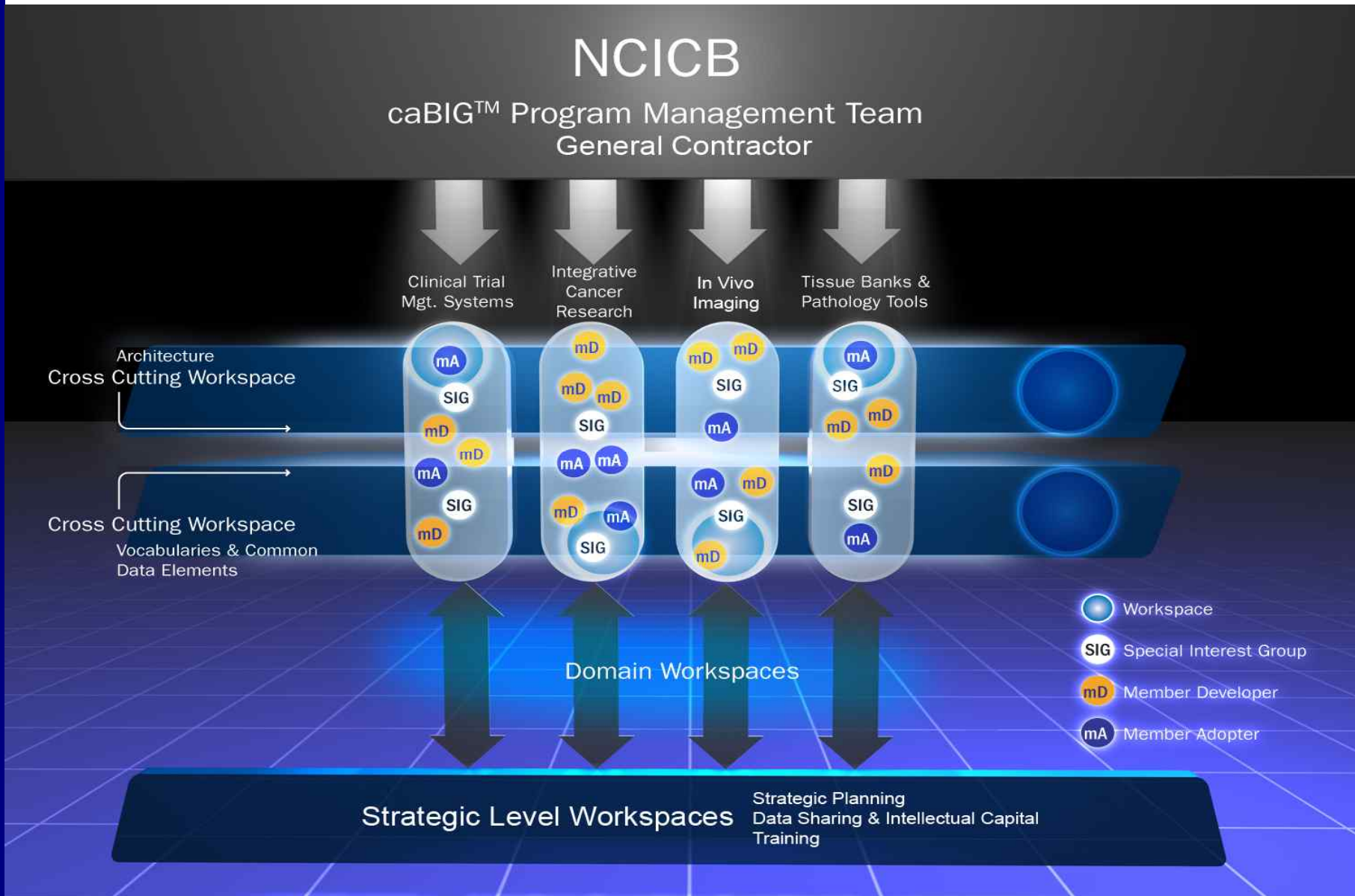
Introduction to Cancer Biomedical Informatics Grid™ (caBIG™)

- Common, widely distributed infrastructure permits research community to focus on innovation
- Shared vocabulary, data elements, data models facilitate information exchange
- Collection of interoperable applications developed to common standards
- Raw published cancer research data is available for mining and integration
- Represents a “superhighway” for interchange of information among cancer centers





The caBIG™ Structure





The caBIG™ Principles

- **Open source**
- **Open access**
- **Open development**
- **Federated**





caBIG™: a new way of doing business...

- **Coordinated development**
- **Active management**
- **Community directed**
- **Common services**





Introduction to caBIG™ In Vivo Imaging Workspace

4 In Vivo Imaging Workspace Goals

- 4 Advance imaging informatics **on multiple fronts**
- 4 Create, optimize, and validate software tools
- 4 Model methods to extract meaning from in vivo imaging data.





In Vivo Imaging Workspace – Dates

- **Formal announcement:** **April 2005**
- **Begin Conference calls:** **October 2005**
- **First Face-to-Face Meeting:** **December, 2005**
- **Testbed Initial Planning** **January 2006**
- **SIGs Bi-weekly Telecons:** **February 2006**
- **Second Face-to-Face Meeting:** **July 2006**
- **RSNA – Testbed & Presentations** **November 2006**



The caBIG™ In Vivo Imaging Structure

- 4 **Lead by Eliot Siegel, MD, (University of Maryland, VA Hospital of Baltimore, MD, NCI CIP).**
- 4 **Four Special Interest Groups (SIG):**
 - 4 **Vocabularies and Common Data Elements.**
 - 4 **Standards and Interoperability**
 - 4 **Software**
 - 4 **Testbed**
- 4 **Fifteen Funded Subject Matter Experts (SME)**
- 4 **More than Seventy Volunteer Participants **including participants from industry****





Special Interest Groups

- Vocabularies and Common Data Elements SIG
Curt Langlotz, MD, PhD and Daniel Rubin, MD
- Standards and Interoperability SIG
David Channin, MD and Paul Nagy, PhD
- Software SIG
Bradley Erickson, MD, PhD and Fred Prior, PhD
- Testbed Special Interest Group
Joel Saltz, MD, PhD





Imaging Workspace Projects

- **Project 1: Middleware**
- **Project 2: Annotations**
- **Project 3: Research Workstation**
- **Project 4: Vocabulary**





caBIG - In Vivo Imaging - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Refresh Mail Desktop Search

Address: https://cabig.nci.nih.gov/workspaces/Imaging/

National Cancer Institute U.S. National Institutes of Health | www.cancer.gov

caBIG™ cancer Biomedical Informatics Grid™

you are not logged in log in

you are here: home » workspaces » in vivo imaging

In Vivo Imaging



In Vivo Imaging--from the molecular level to small animal imaging to clinical imaging of patients--is an essential component of basic and clinical cancer research. The caBIG™ In Vivo Imaging Workspace will focus on identifying the ways in which the wealth of information provided by such imaging, performed at academic and other research centers across the country, can be shared, optimized, and most effectively integrated into the ongoing effort to relieve suffering and death from cancer.

The In Vivo Imaging Workspace was launched during the first week of October 2005, and the opportunity for participation remains open. Initial efforts will involve enlisting the widest possible representation from cancer centers, industry, organizations, and standards-setting groups. Among the earliest of the cooperative workspace tasks will be the identification of overall aims and the most urgent challenges in cancer imaging and sharing of data. The workspace will define the needs for and participate in creating, optimizing, and validating tools and methods to extract meaning from in vivo imaging data. In this process, participants will also be actively engaged in defining, refining, and evolving interoperable in vivo imaging informatics data standards. The in vivo imaging technologies and modalities addressed will include systems for research and clinical imaging of live patients and animals (including single-cell organisms) used as model systems for human disease.

caBIG CALENDAR

« April 2006 »

Su	Mo	Tu	We	Th	Fr	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
						30

Select date for more information.

caBIG NEWS

03-31-2006
[What's BIG This Week - 03/31/06](#)

03-14-2006
[caBIG™ Review of Proposed Age CDE Standard](#)

03-14-2006
[caBIG™ Review of Proposed Language and Social Security Number CDE Standards](#)

02-20-2006
[caBIG™ 2006 Annual Meeting - Online Registration Deadline is](#)

start | http://... | Chat ... | NCI R... | Remo... | caBIG... | EN | 8:08 PM



NCIA

National Cancer Imaging Archive





NCIA-National Cancer Imaging Archive

- **NCIA Rel. 1.0 – End September 2005**
- **NCIA Rel. 1.1 – Mid November 2005**
- **NCIA & Imaging WS Gap Analysis – Mid March 2006**
- **NCIA Rel. 1.2 – Mid April 2006**
- **NCIA Rel. 1.3 – Mid June 2006**
- **NCIA Rel. 2.0 – Mid October 2006**





NCIA-National Cancer Imaging Archive

- **Release 1.2 goes live on April 12, 2006**
- **New Features and Enhancements**
 - **Annotations**
 - **Role Based Authorization**
 - **Saved Queries and Query History**
 - **Reporting**
 - **UI Enhancements**
 - **Central ID mapping**
- **NCIA Release 1.2 will be available for download on both the NCIA portal and NCICB web site**





National Cancer Imaging Archive - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites

Address: <http://ncia.nci.nih.gov/> Go Links >>

National Cancer Institute U.S. National Institutes of Health | www.cancer.gov

NCIA National Cancer Imaging Archive Integrative Cancer Biology Program

Search: Go

Site Map

HOME Overview Informatics Download Collections

WELCOMES TO THE NATIONAL CANCER IMAGING ARCHIVE

National Cancer Imaging Archive (NCIA)

The in vivo image repository provides the cancer research community, industry, and academia with access to image archives that can be used for many purposes including the potential to assist in the development and validation of analytical software tools supporting: lesion detection and classification software, accelerated diagnostic imaging decision, and quantitative imaging assessment of drug response. The repository provides access to imaging resources that will improve the use of imaging in today's cancer research and practice by: increasing the efficiency and reproducibility of imaging cancer detection and diagnosis, leveraging imaging to provide an objective assessment of therapeutic response, and ultimately enabling the development of imaging resources that will lead to improved clinical decision support.

QUICK LINKS

- National Cancer Institute
- cancer Biomedical Informatics Grid (caBIG)
- NCI Center for Bioinformatics

National Cancer Imaging Archive

Imaging Workspace: All Participants Teleconference

Every 4th Tuesday of the month.

Click here for more information.

Click here for Imaging Application.

Done

Start Sent Items - Microsoft... Calendar - Microsoft... NCIA Rel. 1.2 UAT Fil... Presentations Microsoft PowerPoint... National Cancer I...



Microsoft Internet Explorer window showing the National Cancer Imaging Archive (NCIA) website. The browser title is "NCIA - National Cancer Imaging Archive - Microsoft Internet Explorer". The address bar shows the URL: <https://imaging-stage.nci.nih.gov/ncia/faces/baseDef.tiles>.

The website header includes the National Cancer Institute logo and the text "National Cancer Institute" and "U.S. National Institutes of Health | www.cancer.gov". The main heading is "NCIA National Cancer Imaging Archive".

The navigation menu includes: HOME, SEARCH IMAGES, MANAGE DATA BASKET, HELP, LOGOUT.

The left sidebar contains the following sections:

- SITE TOOLS
- DICOM Image Viewers
- MY DATA BASKET
- View Contents (0 Series in Basket)
- MY QUERIES
- View Saved Queries (0 Saved queries)
- View Query History
- QUICK LINKS
 - NCIA NEWS
 - NCI HOME
 - NCICB HOME
- CANCER IMAGING PROGRAM
- Center for Bioinformatics
- RSNA
- NIBIB

The main content area features a banner with the text "an image repository tool" and a "WELCOME TO NATIONAL CANCER IMAGING ARCHIVE" message. Below this, there are two main sections:

- SEARCH IMAGES**: Choose to query the NCIA Image Server using a [Simple Search](#) or an [Advanced Search](#).
- MANAGE DATA BASKET**: Manage the information in your data basket.

On the right side of the main content area, there are two informational boxes:

- NCIA Updates**: New Images available as of Feb 3, 2006
- NCICB Application Support**: Please contact NCICB Application Support group at (301)451 4384 or toll free (888)478 4423 or at ncicb@pop.nci.nih.gov for any questions and suggestions regarding this image repository.

The Windows taskbar at the bottom shows several open applications: Start, Sent Items - Micro..., Calendar - Micro..., NCIA Rel. 1.2 U..., NCIA Presentati..., IVI Conference ..., caBIG Imaging W..., and NCIA - National...



Compliance with Standards

- **NCIA provides compliance with standards:**
 - **Certified as caBIG silver compliant**
 - **Uses caCORE SDK**
 - **caGrid ready**
 - **caBIG compliant API**
 - **CDE driven object model**
 - **CDEs and object model are registered in caDSR**





NCIA as a Repository

- **Several Imaging Workspace projects need an image repository**
 - **Image Acquisition and Redistribution Software**
 - **Viewing and Annotation Software**
 - **Reference Research Workstation**
- **NCIA can be the repository**





Summary

- SIGs will engage in projects that further the strategic goals of the Imaging Workspace and caBIG™ program.
- SIGs will identify synergies with the other caBIG™ workspaces and current **related and synergistic** NCI projects (ex. NCI-A).
- Will seek partnerships with external organizations within the caBIG™ community, to further Imaging Workspace and caBIG™ program goals (ex. ACRIN).

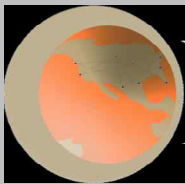




Internet Sites

- NCIA Portal - <http://ncia.nci.nih.gov>
- NCIA Web Application - <http://imaging.nci.nih.gov>
- NCICB - <http://ncicb.nci.nih.gov>
- caBIG - <http://cabig.nci.nih.gov>
- caBIG Imaging Workspace
<http://cabig.nci.nih.gov/workspaces/imaging>





Questions & Comments





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