



caBIG Architecture Working Group Face-To-Face Meeting

- ▶ Best Practices SIG
- ▶ March 18th, 2005
- ▶ David Kane and Jim Harrison

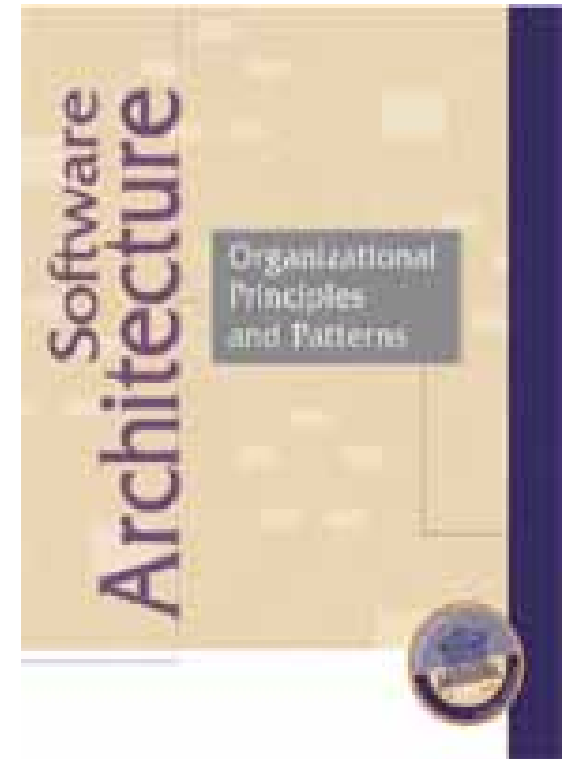
Introducing the Best Practices SIG

- ▶ Focused on identifying, promoting and communicating effective practices for building caBIG-compatible software
- ▶ Goals:
 - Capture and share software development practices
 - Document a set of minimal requirements for building caBIG-compatible software
 - Create an online resource for sharing practices
 - Promote a shared culture of continuous software development and refinement

SIG Co-Chairs

- ▶ Jim Harrison
 - Associate Professor of Pathology at the University of Pittsburgh
 - Medical Director of Laboratory Information Systems (UPMC)
 - Faculty of Center for Biomedical Informatics at the University of Pittsburgh
 - caBIG
 - Training WG
 - Architecture WG

- ▶ David Kane
 - Lead of the Software Team in the NCI/Center for Cancer Research/Laboratory of Molecular Pharmacology
 - Principal, SRA International
 - Author of *Software Architecture: Organizational Principles and Patterns*
 - caBIG
 - Integrative Cancer Research WG
 - Architecture WG



“Best” Practices is a Misnomer

- ▶ Practices depend on context
- ▶ UML modeling context
 - model-driven development
 - informal whiteboard sessions
 - vocabulary definitions
- ▶ The "best" way depends on context
- ▶ We will seek to capture not just the "what" of the best practices, but the "when" as well



What this SIG is not

- ▶ A Process Management Group
- ▶ A Developer of New Practices
- ▶ A Pilot Project Reviewer

Areas of Focus

- ▶ We are planning to focus our efforts
- ▶ Heuristics to identify topics for attention
 - Important for interoperability
 - Unique to caBIG
 - Address obstacles
 - Interested participants
- ▶ Currently, we are not directly working with the Strategic Working Group, but in response to WGs and SIGs



Candidate Topics

- ▶ Automated Testing
- ▶ caArray
- ▶ Design Patterns
- ▶ Documentation
 - Documentation White Paper
- ▶ Performance Benchmarking and Optimization
- ▶ Resource Recommendations
 - Books
- ▶ Software Development Tools and Language Usage Recommendations
- ▶ UML
- ▶ Web Services
 - Especially Interoperability

IDE Recommendations: Illustrating SIG Bounds

- ▶ Discussed as a Candidate Topic
- ▶ If pursued, the SIG might
 - Share which IDEs caBIG pilots are using
 - Identify contexts or situations where one IDE might be better than another
 - Share practices that projects use to be effective with IDEs
 - Share domain specific information
- ▶ The SIG would NOT
 - Suggest or require that all projects use the same IDE

Cathedral and the Bazaar as Applied to Practices

- ▶ Eric Raymond coined the “Cathedral and the Bazaar” metaphor to describe the chaotic, but productive, development approach in open source projects
- ▶ The SIG is not going to be able to use a cathedral approach specify and mandate practices
- ▶ The SIG can gather everyone's ideas into one chaotic bazaar, foster dialog between interested participants, and work to disseminate ideas
- ▶ Individual developers can “shop” at the bazaar, and pick and choose those things which fit best for them

Collaboration Experiment: aka Building our Bazaar

- ▶ Relative to the size of caBIG (and our SIG scope), the BP SIG is a small group
- ▶ We need to leverage the activities that are already ongoing
- ▶ We are experimenting with a Wiki



Wikis In General

- ▶ A Wiki is a network of web pages that users can edit through the web, simply
 - Create new pages
 - Comment on content
 - Revise content
- ▶ Wikipedia is perhaps the biggest and most active Wiki instance (>500K articles)
- ▶ Multiple implementations with varying features
 - Access control
 - File repository
 - Issue trackers
 - Email alerting to new edits on subscribed pages



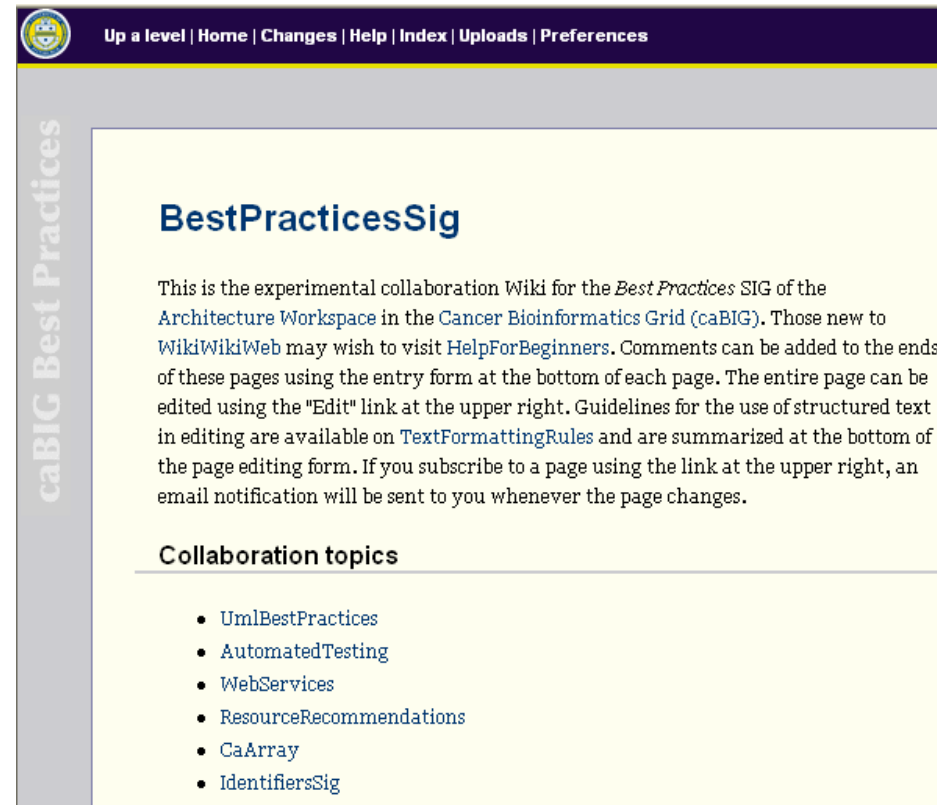
- ▶ Create, comment, refactor cycle can seem a bit chaotic
- ▶ Wikis can effectively help groups collaborate and converge on documents describing their shared understanding

Our General Usage Wiki Strategy

- ▶ Initiate a Wiki experiment with minimum effort and expense
 - Leverage an existing server and Wiki instance
- ▶ Establish Wiki pages on topics of interest
- ▶ Encourage stakeholders to contribute
- ▶ Refactor the pages to create useful information resources
 - Consolidate comments and extract sub pages as appropriate

Wiki Testing and Migration

- ▶ Hosted on Jim Harrison's Wiki instance
- ▶ Created collaboration topics
- ▶ Will assess and document response (white paper)
- ▶ If successful, we will recommend creation of an NCICB-hosted Wiki instance
- ▶ Content and structure can be transferred, if appropriate



The screenshot shows a web browser window displaying a Wiki page titled "BestPracticesSig". The page has a dark blue header with navigation links: "Up a level | Home | Changes | Help | Index | Uploads | Preferences". A vertical sidebar on the left contains the text "caBIG Best Practices". The main content area has a yellow background and features the title "BestPracticesSig" in blue. Below the title is a paragraph of text explaining the page's purpose as an experimental collaboration Wiki for the Best Practices SIG of the Architecture Workspace in the Cancer Bioinformatics Grid (caBIG). It mentions that new users can visit "HelpForBeginners" and that comments can be added to the end of pages. It also notes that the entire page can be edited using an "Edit" link and that guidelines for structured text are available on "TextFormattingRules". Below the text is a section titled "Collaboration topics" with a list of links: "UmlBestPractices", "AutomatedTesting", "WebServices", "ResourceRecommendations", "CaArray", and "IdentifiersSig".

Early Wiki Usage Examples

- ▶ DocumentationWhitePaper
- ▶ IdentifiersFaq
- ▶ UmlBestPractices
- ▶ WebServices

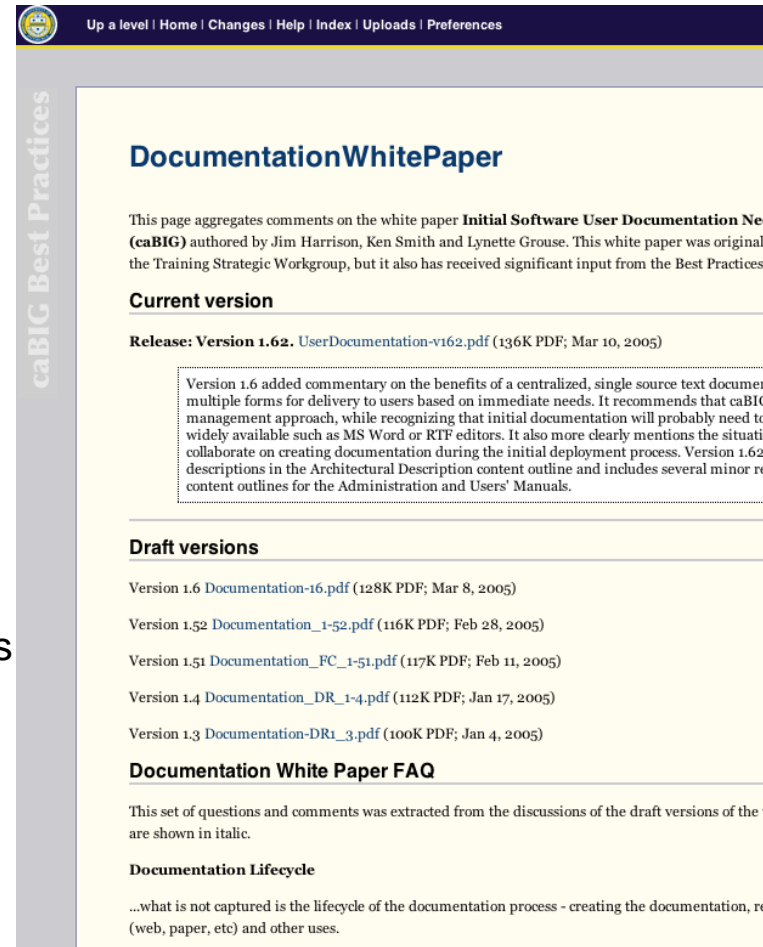
Activity and discussion on all these topics

Wiki and You

- ▶ We encourage you to participate in Best Practices on pages of interest, or to create new pages
- ▶ If your SIG is interested in Wiki collaboration in general, consider joining the trial
 - Provide feedback on our reflection page
 - Be aware that this is still in an evaluation stage
- ▶ If you are interested in a demo of the Best Practices Wiki, ask Jim or Dave

Documentation White Paper

- ▶ Originated from Training Group, User Documentation SIG
- ▶ Developed, finalized and managed by the Best Practices SIG
- ▶ Goals of the document are to
 - Review existing documentation standards; recommend user documentation content and structure
 - Examine issues and technologies in the documentation space and recommend future directions
 - Stimulate discussion on documentation issues
 - Developed on the Wiki through commentary on multiple revisions
 - Illustrates a typical Wiki workflow and refactoring process
- ▶ Commentary on intermediate drafts developed into an FAQ document



Up a level | Home | Changes | Help | Index | Uploads | Preferences

Documentation White Paper

This page aggregates comments on the white paper **Initial Software User Documentation Needs (caBIG)** authored by Jim Harrison, Ken Smith and Lynette Grouse. This white paper was originally the Training Strategic Workgroup, but it also has received significant input from the Best Practices

Current version

Release: Version 1.62. [UserDocumentation-v162.pdf](#) (136K PDF; Mar 10, 2005)

Version 1.6 added commentary on the benefits of a centralized, single source text document multiple forms for delivery to users based on immediate needs. It recommends that caBIG management approach, while recognizing that initial documentation will probably need to be widely available such as MS Word or RTF editors. It also more clearly mentions the situation of collaborating on creating documentation during the initial deployment process. Version 1.62 descriptions in the Architectural Description content outline and includes several minor rewording content outlines for the Administration and Users' Manuals.

Draft versions

Version 1.6 [Documentation-16.pdf](#) (128K PDF; Mar 8, 2005)

Version 1.52 [Documentation_1-52.pdf](#) (116K PDF; Feb 28, 2005)

Version 1.51 [Documentation_FC_1-51.pdf](#) (117K PDF; Feb 11, 2005)

Version 1.4 [Documentation_DR_1-4.pdf](#) (112K PDF; Jan 17, 2005)

Version 1.3 [Documentation-DR1_3.pdf](#) (100K PDF; Jan 4, 2005)

Documentation White Paper FAQ

This set of questions and comments was extracted from the discussions of the draft versions of the white paper. Comments and questions are shown in *italic*.

Documentation Lifecycle

...what is not captured is the lifecycle of the documentation process - creating the documentation, reviewing it (web, paper, etc) and other uses.

Questions?

