



# ILC

## EDMS Selection Committee

### Progress Report

Tom Markiewicz  
SLAC  
10 March 2006  
Bangalore GDE Meeting

## Committee Members

John Ferguson – CERN

Lars Hagge - DESY

Tom Markiewicz\* - SLAC (Chair)

Richard Stanek\* - FNAL

Nobu Toge\* - KEK

Harry Weerts\* - Argonne

\* = present at Bangalore

## Charge to the Committee

The committee should recommend a specific web based software solution, which may mean an integrated collection of distinct software packages that will allow ILC collaborators worldwide to store, search for and retrieve various kinds of documents.

At least three basic kinds of documents must be handled:

1. meeting/conference/seminar related files
2. publications/white papers/notes and
3. engineering documents:
  - CAD drawings, cost estimates, vendor quotes, and QC documents.

## Timeline (from Charge)

A **progress report** to the GDE should be made at the December 2005 meeting. It is **hoped** that a **decision** can be made **early** enough in **2006** that **implementation**, testing and backfilling of the archive can occur **before** the fourth meeting of the GDE in **March 2006**, with **release** to the general ILC community targeted to **April 1, 2006**.

## Status

A decision has been made to recommend a product suite composed of

- InDiCo – meeting management
- CERN Document Server – general documentation
- UGS TeamCenter – CAD and ILC “Lifecycle Management” (jargon for: part design, versions, manufactured instances, installation, operation, maintenance & decommissioning)

ILC Specific servers have been commissioned

- InDiCo: <http://ilcagenda.cern.ch/>
- CDS: <http://ilcdoc.cern.ch/>

Negotiations for ILC-devoted technical support of these products with CERN DG and DESY Research Director have begun

## Why This Talk Today?

**In an ideal world (think restaurant, commercial software) some group would package all the tools, load them with content, debug the system and have a trained support staff ready before “product launch”**

- You never have a second chance to make a first impression

**However, we view the GDE as venture cap investors not customers and we want to take opportunity of this meeting to discuss the best way to proceed before the “initial public offering” to the wider ILC community**

## Treading the Slippery Slope Between Recommendation, Implementation, Configuration & Support

- **The EDMS Selection Committee is not qualified and has not agreed to do anything other than to recommend and justify its recommendation**
  - Lars is an expert; John as well, but now a chief
- **There are many other stakeholders who need to be consulted regarding configuration**
  - DCB, CCB, relevant Engineering and IT departments
- **Embedding these tools in an appropriate environment along with other tools required for effective international communication (email-listservers, discussion boards, wiki-pages, vid-con, tel-con,..), secure yet convenient user authentication, project management tools (cost breakdown and work breakdown tools) and creating a support team will be essential if ILC wants a unfragmented knowledgebase**
  - We strongly recommend that Exec Comm takes action here

## Access to Tools Through EDMS Web Page: Possible Solutions



The screenshot shows a web browser window displaying the ILC DMS Selection Home Page. The page header includes the ILC logo and the text "International Linear Collider". Below the header, there is a navigation bar with buttons for "Edit this page", "Old revisions", "Recent changes", and "Search". A breadcrumb trail reads: "Trace: » members » possible\_solutions » files\_of\_relevant\_information » meetings » ilc\_dms\_selection\_home". The main content area is titled "ILC DMS Selection Home Page" and lists several links: "Charge to the Committee", "Members", "Meetings", "Possible solutions", and "Files of Relevant Information". At the bottom of the main content area, it says "Logged in as: Tom Markiewicz" and "ilc\_dms\_selection/ilc\_dms\_selection\_home.txt · Last modified: 2005/11/28 20:12 by tom\_markiewicz". The footer contains buttons for "Edit this page", "Old revisions", "Logout", "Index", and "Back to top", along with "RSS" and "XML FEED" links.

[http://www.linearcollider.org/wiki/doku.php?id=ilc\\_dms\\_selection:  
ilc\\_dms\\_selection\\_home](http://www.linearcollider.org/wiki/doku.php?id=ilc_dms_selection:ilc_dms_selection_home)



# Access to Tools Through EDMS Web Page: Possible Solutions

## Possible Solutions

Table of Contents ▲

- Possible Solutions
  - InDiCo
  - CERN Document Server (CDS)
  - SLAC WBS Tool

Edit

### InDiCo

- [InDiCo Home Page](#)
- [The CERN InDiCo Server](#)

Note that ~20000 meetings recorded in the CERN CDS Agenda have been converted to InDiCo and are in the process (as of 2006.01.17) of being migrated to the InDiCo production server.

Slides presented during InDiCo demo at 2005.11.08 meeting of by Thomas Baron

- [Talk on InDiCo given at 2005.10.10 HEPiX meeting at SLAC by Thomas Baron.](#)

Proposed InDiCo Tree Structure for ILC and Related Questions

- [InDiCo Questions and Answers](#)
- [InDiCo Bugs Reported by Users](#)
- [InDiCo Wish List Items Submitted by Users](#)

- [ILC InDiCo Server](#)
- [ILC InDiCo Registration Page](#)
- [ILC InDiCo Help & Documentation](#)

- Note that the [main meeting user documentation](#) may not at first be evident among the many files meant to provide help to conference setup.

Edit

### CERN Document Server (CDS)

- [CERN Document Server, opening at Search Page](#)
- [Another point of access to CERN Document Server, with latest news](#)
- [CDS Software Consortium](#)

Demo of CERN Document System by Jean Yves Le Meur

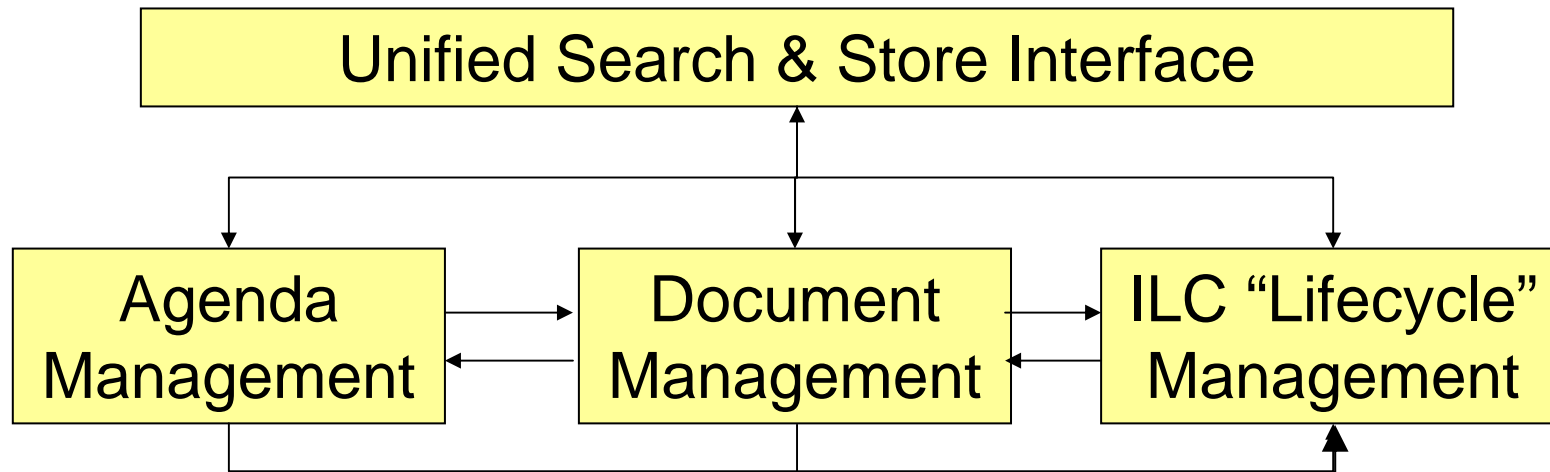
- [ILC Document Server](#)

Edit

### SLAC WBS Tool

- [WBS Tool Home Page](#)
- [Example of htm code to display wbs](#)

## Eventual Top Level Architecture



Before it declares success and retires, EDMS committee will work with current technical experts to

- implement a basic version of this architecture
- devise an interim support model, upgrade path & schedule

## Monolithic vs. Separate Products

**Considering the phase transitions the EDMS is meant to span**

**gaseous to frozen**

**scientific to engineering**

**light to heavy**

**free submission to controlled submission**

**many untrained users to relatively few highly trained users**

**all roughly correlated to period when variants in design & configuration is done by physicists and is to be encouraged and facilitated vs. period when strict engineering change control by project managers, engineers, designers and purchase agents is desired, we did not think a monolithic solution would be viable.**

## What is NOT in the EDMS

- **It would be technically easy to incorporate listserver and bulletin board like content**
- **Nonetheless, it was decided to ask the submitter to make a conscious decision to “archive” the results of an email thread or discussion board summary, rather than to automatically incorporate all communication**
- **Once a conscious decision is made, an individual or group can post anything it wants with whatever level of review it decides is appropriate**

## Justification of Choice in a Nutshell

**Once the model became one where “best of breed” was allowed:**

**INDICO** was chosen for its “value added” meeting & conference management features, CDS Agenda heritage, strong support team with active plans for product improvement & willingness to host ILC

Deciding whether or not to merge document management, which has a component of “change control” or “management authorization” with the EDMS products that have good but “heavy” “work flow” engines was difficult. Need, especially at this point in ILC lifecycle to encourage communication led to decision to use separate product. **CDSware** was chosen as it will eventually be integrated with InDiCo, has flexible work flow configuration, strong support team & willingness to host.

We do feel a beta test is required before this decision is cast in stone.

Decision between Axalant (CERN/LHC) and **Teamcenter** (DESY/XFEL) products for hard-core EDMS came to conscious choice of a “tightly” coupled 3D CAD-EDMS Teamcenter designed to support collaborative engineering over the battle tested older product used to build the LHC that uses an “integration team” to ensure part compatibility. Intrinsic to this decision was the admission by all parties that:

TeamCenter had all the basic hooks required to develop its “work flow” and needed time & experience

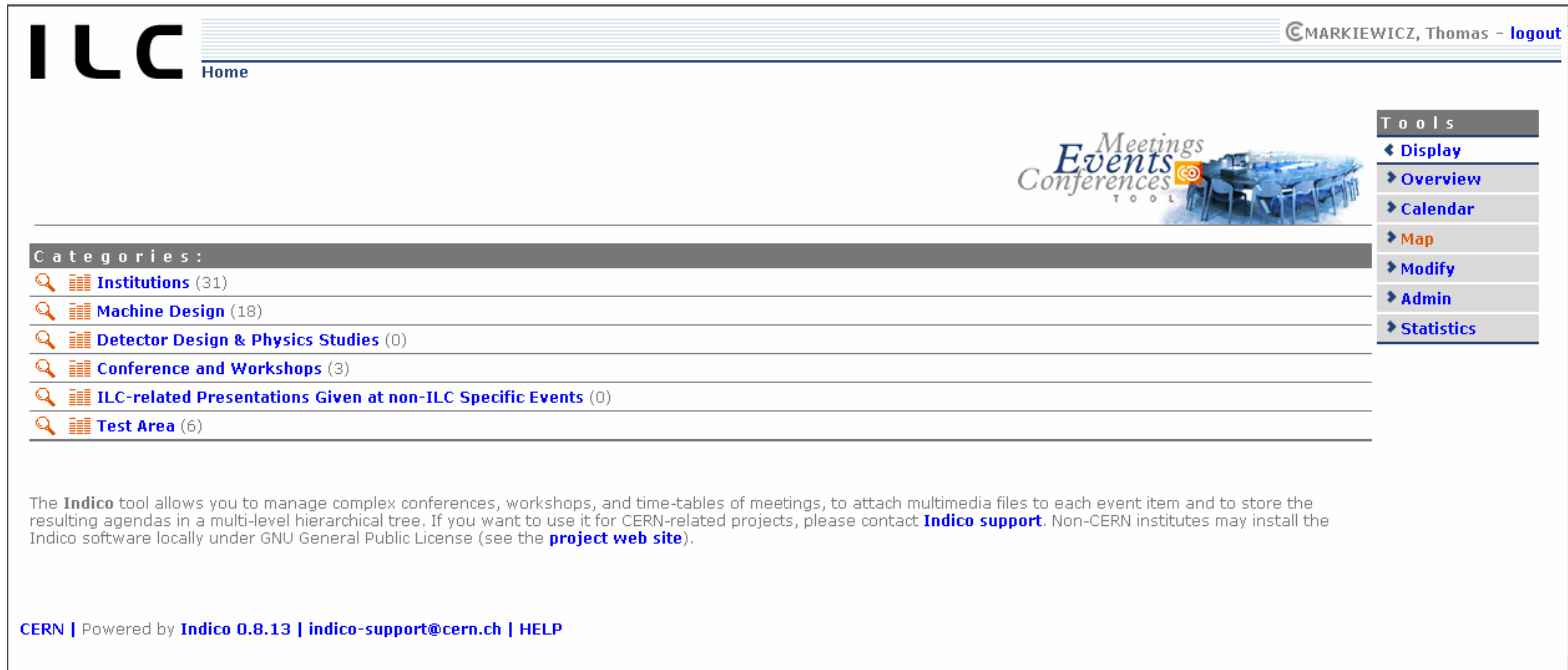
CERN would help in this effort

Tight-coupling between “privileged” CAD systems did not exclude ANY CAD system used in the manner employed at CERN

**More on this topic later.**

An ILC specific instance and beta testing recommended here as well.

# ILC InDiCo Server



The screenshot shows the ILC InDiCo Server interface. At the top left is the ILC logo and the text "Home". At the top right, it says "MARKIEWICZ, Thomas - logout". In the center, there is a graphic for "Meetings Events Conferences TOOL" with an image of a meeting room. On the right side, there is a "Tools" menu with options: Display, Overview, Calendar, Map, Modify, Admin, and Statistics. Below this is a "Categories:" section with a list of categories and their counts: Institutions (31), Machine Design (18), Detector Design & Physics Studies (0), Conference and Workshops (3), ILC-related Presentations Given at non-ILC Specific Events (0), and Test Area (6). At the bottom, there is a paragraph of text explaining the Indico tool and its purpose, followed by a footer that says "CERN | Powered by Indico 0.8.13 | indico-support@cern.ch | HELP".

Basic category “tree” discussed with ExecComm & implemented  
“Managers” appointed for each category  
Beta-testers recruited: ~50 meetings in system  
TWM fields questions & punts to CERN when required  
Start of a “Wish list,” “Bug List” & “Q&A” on EDMS wiki

# InDiCo Search



**Tools**

- ◀ Display
- Overview
- Calendar
- Map
- Statistics
- **Search**

**Implemented on CERN server,  
soon to added to ILC Server**

## Indico Search

**Search:**

All of the words:  any field  AND

All of the words:  any field  AND

All of the words:  any field

[Search Tips](#) :: [Simple Search](#) :: [Try your search on...](#)

**Search collections:**

\*\*\* any collection \*\*\*

**Limit to:**

**Sort by:**

**Display results:**

**Output format:**

**Categories:**

		<a href="#">Committees</a> (428)
		<a href="#">Conferences, Workshops and Events</a> (265)
		<a href="#">Departments</a> (1542)
		<a href="#">Experiments</a> (3756)
		<a href="#">Projects</a> (277)
		<a href="#">TEST Category</a> (78)
		<a href="#">Seminars and Courses</a> (7)
		<a href="#">CERN-Related Clubs and Associations</a> (28)

### Indico Search Engine

1 records found

Search took 0.06 seconds.

- 19 Mar 2006 8:00 LCWS06 (Linear Collider Workshop 2006)  
LCWS is a workshop organised at IISc, Bangalore to discuss accelerator and detector designs and the physics potential of High Energy Linear Colliders. [...]  
- [Event details](#) - [Similar records](#)

# ILC Document Server

ILC  
DOCUMENT  
SERVER

Search

Submit

Personalize

Help

Home

## ILC Document Server

Search 77 records for:

any field

[Search Tips](#) :: [Advanced Search](#)

### Narrow by collection:

- [Publications & Notes](#) (68)
  - [Articles & Preprints](#) (44)
  - [Books & Reports](#) (24)
- [Engineering & Drawings](#) (0)
- [Conferences & Meetings](#) (0)
- [Multimedia & Arts](#) (9)
  - [Pictures](#) (7)
  - [Poetry](#) (2)

### Focus on:

- [ILC Institutions](#) (5)
- [Fermilab](#) (1)
- [SLAC](#) (4)
- [ILC Experiments](#) (2)
- [ALEPH](#) (1)
- [ISOLDE](#) (1)

ILC Document Server :: [Search](#) :: [Submit](#) :: [Personalize](#) :: [Help](#)  
 Powered by CDSware v0.9.0.20051220  
 Maintained by [cds.support@cern.ch](mailto:cds.support@cern.ch)  
 Last updated: 21 Feb 2006 11:10:23 CET

## CERN Document Server

Over **800,000** bibliographic records, including **360,000** fulltext documents, of interest to people working in particle physics and related areas. Covers preprints, articles, books, journals, photographs, and much more.

Search 830,544 records for:

any field

[Search Tips](#) :: [Advanced Search](#)

### Narrow by collection:

- [Articles & Preprints](#) (679,720)
  - [Published Articles](#) (256,196)
  - [Preprints](#) (346,803)
  - [Theses](#) (35,980)
  - [Reports](#) (5,455)
  - [CERN Internal Notes](#) (10,307)
  - [Committee Documents](#) (26,428)
- [Books & Proceedings](#) (55,981)
  - [Books](#) (32,686)
  - [Proceedings](#) (15,489)
  - [Standards](#) (7,806)
- [Presentations & Talks](#) (14,945)
  - [Conference Announcements](#) (13,022)
  - [Academic Training Lectures](#) (523)
  - [Summer Student Lectures](#) (340)
  - [General Talks](#) (1,387)
  - [Videotapes](#) (299)
- [Periodicals & Progress Reports](#) (3,372)
  - [Periodicals](#) (2,690)
  - [Progress Reports](#) (682)
- [Multimedia & Outreach](#) (28,690)
  - [Photos](#) (9,031)
  - [Videos](#) (184)
  - [Press](#) (16,001)
  - [Audio Archives](#) (158)
  - [Exhibition Objects](#) (179)
  - [Brochures](#) (15)
  - [Posters](#) (334)
  - [HEP Institutes](#) (924)
  - [Experiments at CERN](#) (733)
  - [Internet Resources](#) (1,094)
- [Archives](#) (33,217)
  - [CERN Archives](#) (47,094)
  - [Pauli Archives](#) (3,711)
  - [DSU Archives](#) (701)
  - [SL Archives](#) (1,026)
  - [AB Archives](#) (685)

### Focus on:

- [CERN Articles & Preprints](#) (86,447)
- [CERN Published Articles](#) (45,374)
- [CERN Preprints](#) (11,177)
- [CERN Theses](#) (2,470)
- [CERN Reports](#) (1,052)
- [Committee Documents](#) (26,428)
- [CERN Departments](#) (39,829)
  - [Accelerator Technology \(AT\)](#) (4,451)
  - [Accelerators & Beams \(AB\)](#) (1,446)
  - [Finance \(FI\)](#) (616)
  - [Human Resources \(HR\)](#)
  - [Information Technology \(IT\)](#) (2,071)
  - [Physics \(PH\)](#) (34,808)
  - [Secretariat-General \(SG\)](#) (6,337)
  - [Technical Support \(TS\)](#) (1,042)
- [CERN Experiments](#) (13,290)
- [LEP Experiments](#) (4,932)
- [LHC Experiments](#) (8,362)
- [CERN R&D Projects](#) (45)
- [CERN Accelerator R&D Projects](#) (45)
- [CERN Series](#) (2,941)
- [CERN Yellow Reports](#) (1,094)
- [Academic Training Lectures](#) (523)
- [Summer Student Lectures](#) (340)
- [General Talks](#) (1,387)

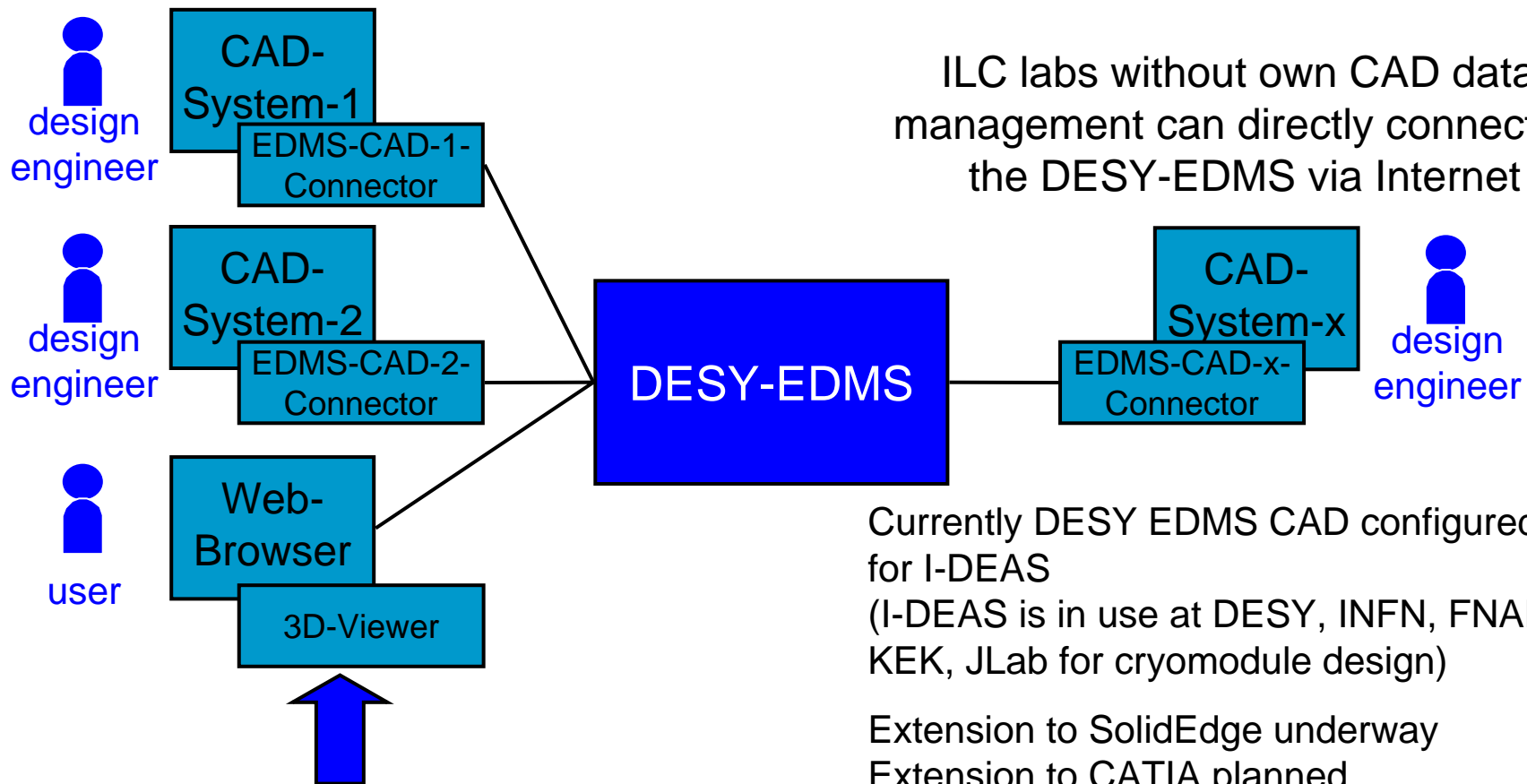
Site created so that ILC can understand how to best set “collection” types, “category” types and work flow (approval chain)

CCB (N.Toge) asked to be first beta tester for multi-part BCD document  
 NO ILC customization or testing done yet.



# Relation between EDMS & CAD

DESY operates a Web-based EDMS  
with Multi-CAD connectors



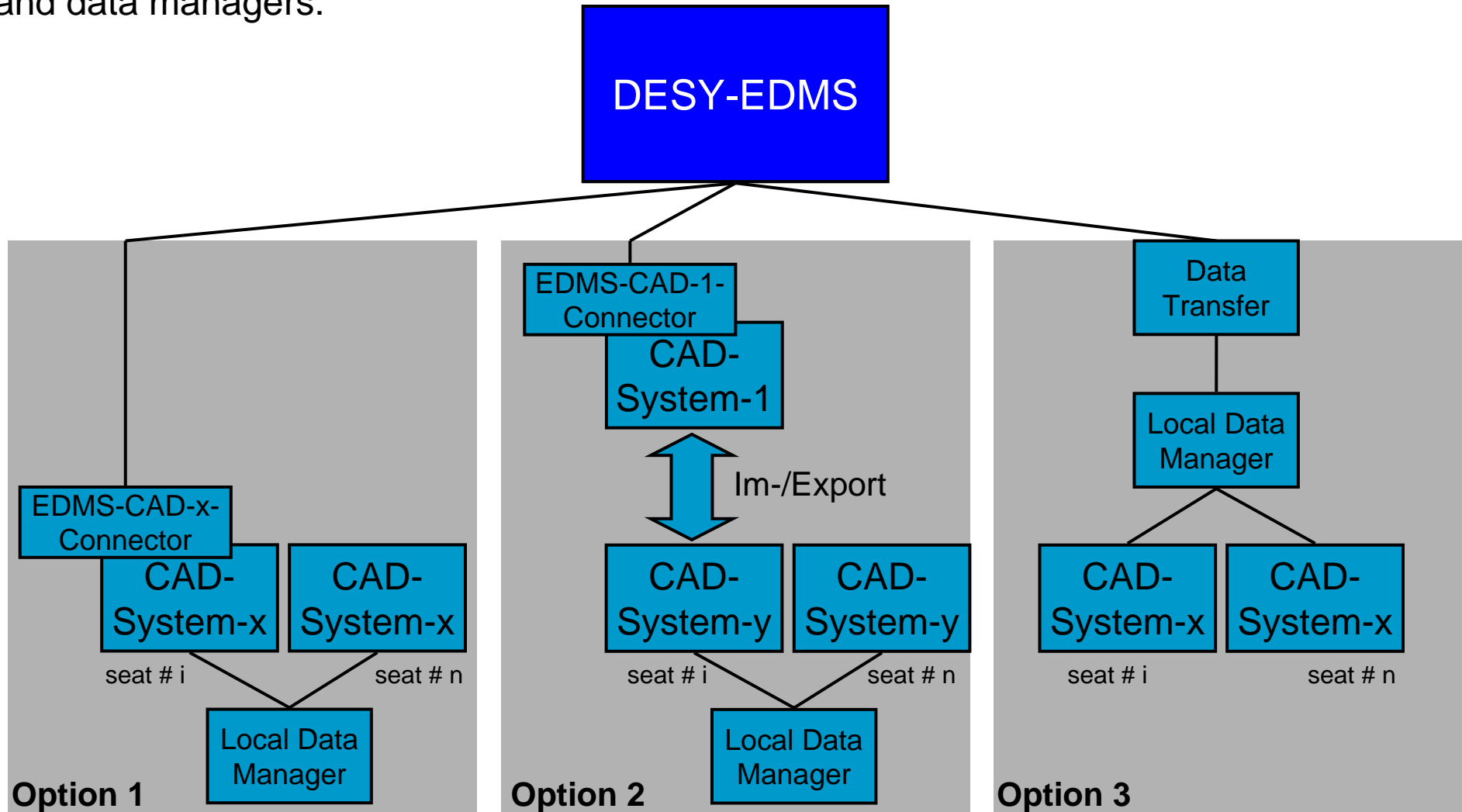
any lab can access the EDMS  
by Web browser and viewers

Currently DESY EDMS CAD configured  
for I-DEAS  
(I-DEAS is in use at DESY, INFN, FNAL,  
KEK, JLab for cryomodule design)

Extension to SolidEdge underway  
Extension to CATIA planned

“Drawings” (as opposed to integrated 3-D  
assemblies) from ANY CAD product can  
be stored

At least three options exist for connecting ILC labs which are operating their own local data managers to the DESY-EDMS, depending on the nature of their CAD systems and data managers:



**Option 1**  
 Engineers save to either the local data manager or to the DESY-EDMS

**Option 2**  
 Engineers export from locally connected CAD-y seat and import into DESY-connected CAD-1 seat (and vice versa)

**Option 3**  
 Engineers exchange data between their local data manager and the DESY-EDMS (direct connect, transfer file ...)

*Tom Markiewicz*

## Real Time EDMS Examples

- **Example 1: US Industrial Cost Study for RDR**
  - Would like a complete package of drawings for vendors to study in order to estimate US cost of Type III+ cryomodule
  - 3D solid model has just been created using combination of DESY and INFN components (inside DESY EDMS)
  - BOM includes a list of all the parts but many parts do not yet have associated drawings. Drawings may exist but are not yet related to the parts.
    - Question: Do I have the latest drawing and is it consistent with the 3D model and what is actually being built?
    - Answer: Would be YES if everyone was properly using the same data files in a shared EDMS
  - Eventually there will be slight regional variations of the drawings (language, standards, common sizes) but still want to keep as much of the design consistent as possible.

## Real Time EDMS Examples (cont'd)

- **Example 2: Tunnel Layout**
  - There may be as many as three different tunnel layouts being worked on right now
    - Question: Is everyone using consistent dimensions for components (cryomodule, klystrons, waveguides, etc.) and do these components reflect the latest information from the Technical and Area Groups?
    - Answer: Would be YES if everyone was properly using the same data files in a shared EDMS. Could even assure that proposed changes in the tunnel layout could get “approved” by technical experts before they are accepted. Sharing 3D model files would save time, assure consistency and help eliminate errors.

## Conclusion

- **The EDMS committee recommends the approach outlined in this talk**
- **A complete light-weight instance should be configured and implemented by an expanded team of interested parties and the result tested enough to approve/reject before 100% project approval**
- **Action by director, executive committee, RDR matrix leaders and users required if this is to go smoothly.**
  - **Good will and patience during learning period would be beneficial as well, even if “it wasn’t invented here”**