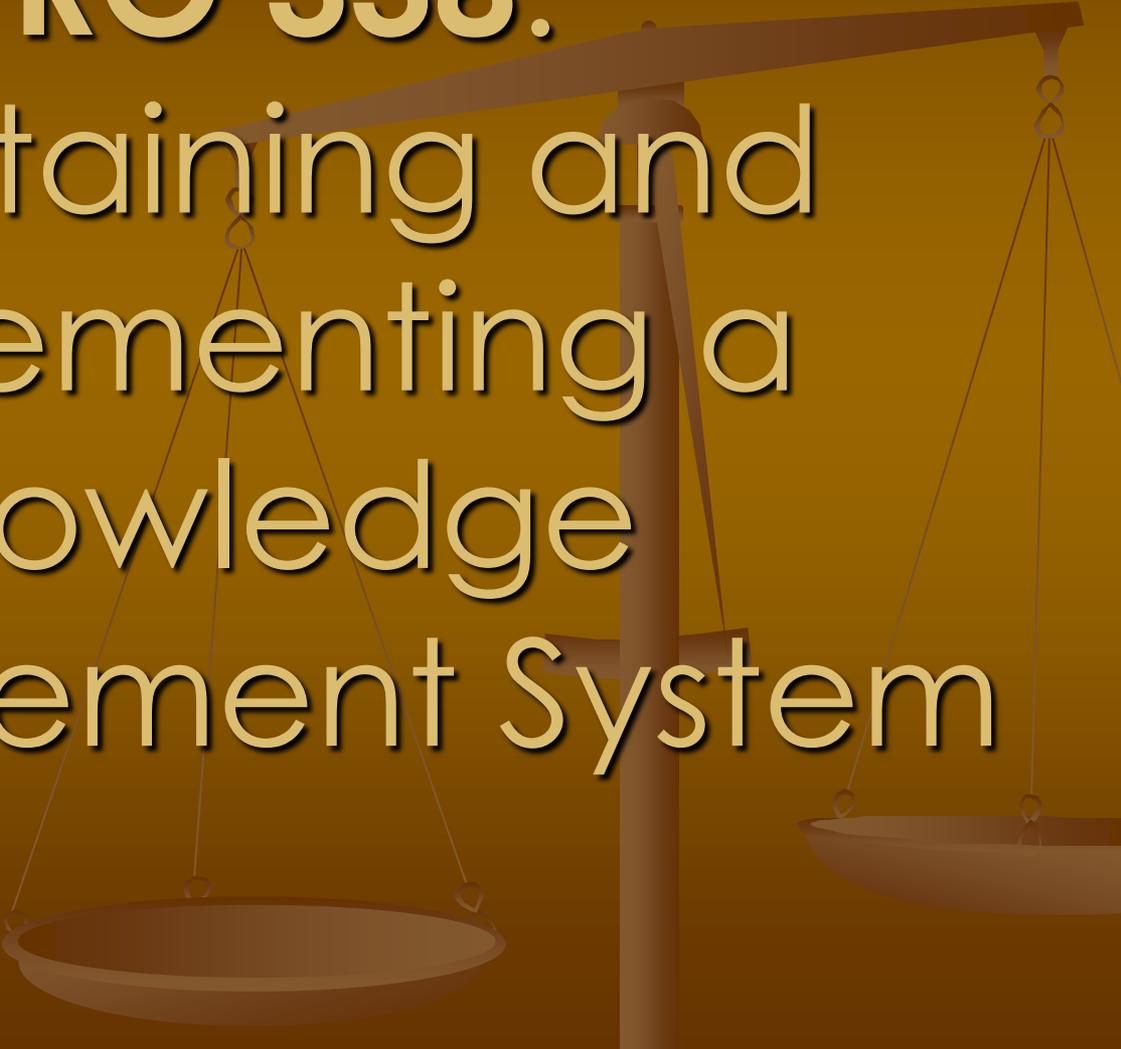


IPRO DAY Spring 2006

## **IPRO 338:**

Maintaining and  
Implementing a  
Knowledge  
Management System



# Agenda

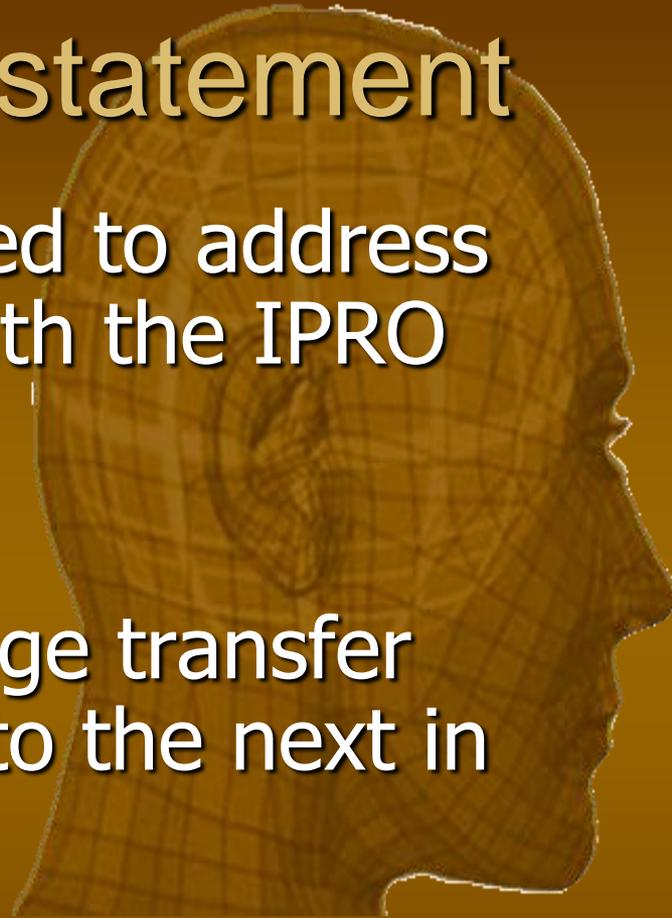


- Problem statement
- Challenges throughout the semester
- Accomplishments
- Outcome and implications for the future

# Problem statement

IPRO 338 was designed to address a critical problem with the IPRO Program:

- The lack of knowledge transfer from one semester to the next in the IPRO program



# IPRO Turnover

- 50% of IPRO teams continue across semesters
- 85% of students are new to their IPRO team
- Essential knowledge sharing to ensure a successful IPRO
- Tools for addressing this issue:  
iKNOW & iGroups

# Terminology



- Knowledge Management
  - Capture, sharing, and transfer of knowledge or *nuggets*
- Nugget
  - A container that can have data and file (s) and *metadata*
- Metadata
  - ALL the who, what, when, why and how of why it was created/invented/manufactured...

# What is iKNOW and iGroups?

- iKNOW is a knowledge management system
  - Gives students and faculty the ability to capture and share vital files/deliverables related to their IPRO
- iGroups is a communication management system
  - Captures the communication between team members during the semester including: emails, file versions, meeting minutes, etc.

# IPRO 338

## History in Review

- Fall 2003:  
Researching Knowledge Management
- Spring 2004:  
Development of iKNOW 1.0
- Fall 2004:  
Testing and Implementation of iKnow
- Summer 2005:  
Design and development of iGroups 1.0
- Fall 2005:  
Improving overall usability of iKNOW and iGroups

# Spring 2006 Objectives

- 2 subteams:  
Implementation  
Technical



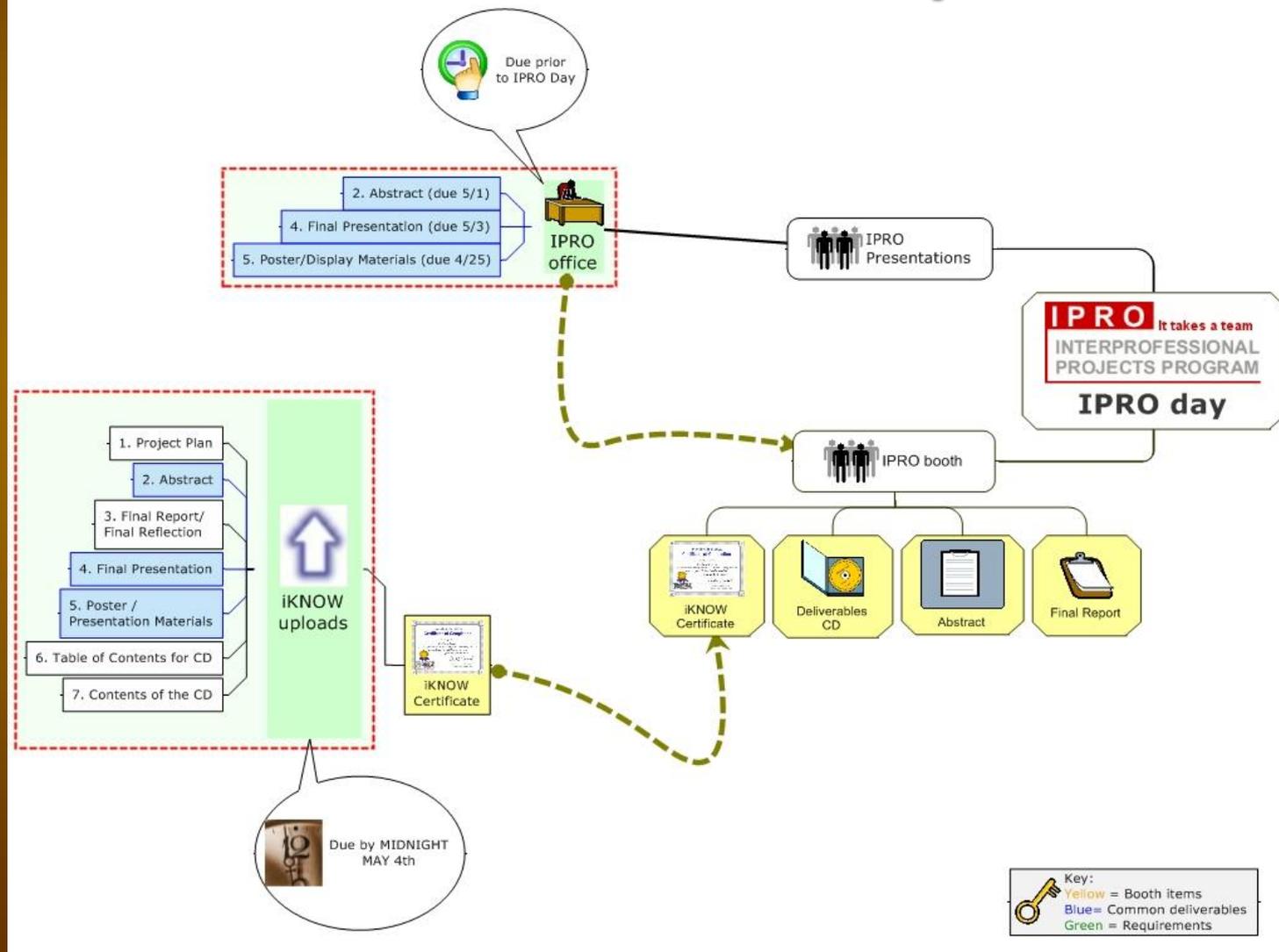
# Implementation Team Semester Goals

- Training
  - all 36 IPRO teams to effectively use iKNOW
- Improve usability
  - Interface
- Full implementation of iKNOW
  - Compliance in uploads

# Implementation team Execution

- Step 1:
  - Fall '05 data uploaded
- Step 2:
  - Wellness checks and training for deliverables
  - Usability
- Step 3
  - Training materials
  - Meetings with IPRO teams
    - Certificate and incentive program

# Implementation team iKNOW submission process



# Implementation Team Challenges

- Resistance from IPRO teams to use the system
- Usability Issues
- Stability of the system



*by Kevin Chang*

# Implementation Team

- Resistance from IPRO teams
  - Changing the system



# Implementation Team

- Usability Issues



# Implementation Team

- Stability of the system



# Implementation team Accomplishments

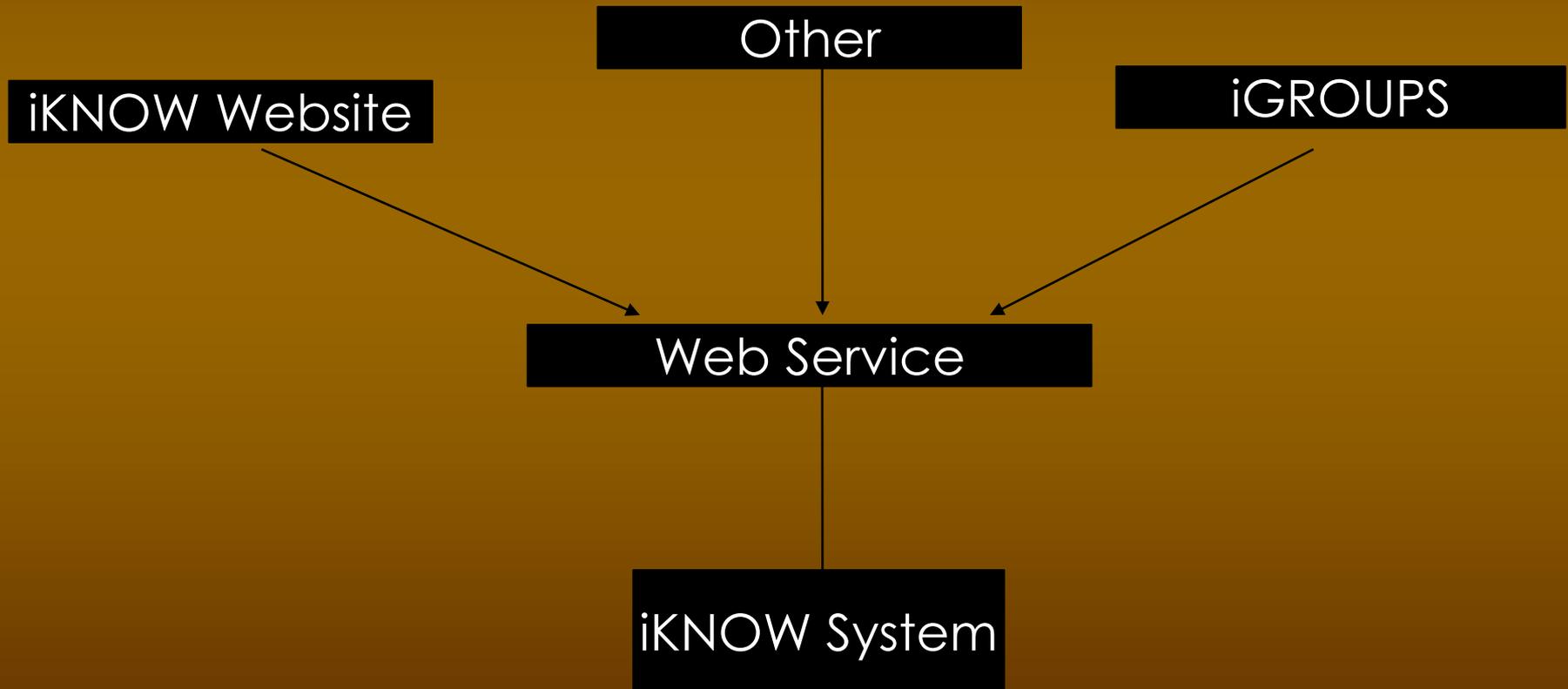
- High compliance among IPRO teams
- Completed usability tests



# Why Webservice?

- Access Issues:
  - iGroups cannot upload or access iKNOW information
  - 3<sup>rd</sup> Party systems may want to update or access iKNOW
- Current iKNOW system
  - Difficult to maintain
  - Difficult to significantly improve
  - Data is not centrally checked and/or authorized

# Webservice in Context



# Webservice Challenges

- Two semester project
- Recode most iKNOW functionality
- Design a central access
- Correctly authorize and validate all data



# Webservice Accomplishments

- SOAP: Simple Object Access Protocol
  - Standardized and Industry Accepted
  - XML-based protocol for exchanging messages
- Unified access to information stored on iKNOW system
- iKNOW system can be updated without change to applications

# Metadata screens

- Simplify standard IPRO deliverable vs. OTHER deliverables
- Increase number of files
- Simplify author and expert additions

**Nugget Creation Process**  
*You are submitting a document in support of IPR0338, Building and Implementing a Knowledge Management System*

IPRO Deliverable       Other Team Deliverables      [Help](#)

**Title of document** (only required for Non-Deliverables)

**Abstract or Executive Summary**(only required for Non-Deliverables)

**Document Type** [Help](#)  
Select the type of deliverable from this list

Abstract ▾

**Team Members Involved** [Help](#)  
Select members involved in creating this deliverable. If one person did most of the work on the document, select the "Primary Author" radio button for that individual.

Primary Author: Robinson, Joy ▾

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**Category (required)** [Help](#)  
Check categories that apply to this document.

Business > Management > Knowledge Management  
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**How you created this** (only required for Non-Deliverables)

**Comments** [Help](#)  
Was there anything in making this document you'd like to comment on?

**Files** [Help](#)  
Upload the file(s) for this nugget

File 1:

[Click here to add another file.](#)

# Search Engine Goals

- To improve search results
  - Implement a search engine that Dynamically updates the index
  - Add Boolean searching capability
  - Ability to add unique weighting to search results

# Search Engine- what we did

- Researched how to use the open source search engine (Lucene)
- Updated our beta-Lucene search engine from 1.3 to 1.9
- Role out of Lucene search engine in Production version of iKNOW 2.0

# Search Engine- Challenges

- Learning curve
- Using Lucene

# Search Engine Accomplishments

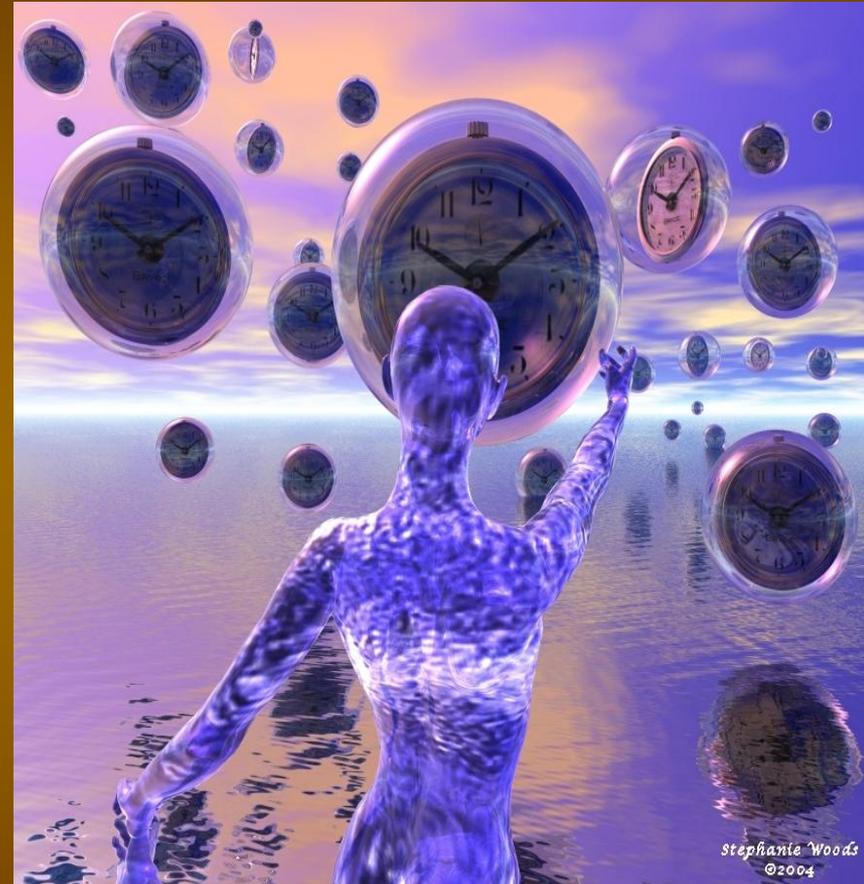
Converted from Aire search engine to Lucene

- Aire had limitations it
- Dynamic indexing
- No weighted results
- No Boolean searches
- New metadata capture screen



# Implications for the future...

- Integration of iKNOW & iGroups into one system
- Continued cooperation from IPRO program to reinforce the usage of iKNOW



# Conclusion

- Worked on one of the most difficult issues in any work environment-culture
- Successfully implementation of iKNOW throughout the IPRO program
- Fixed technical problems to make the system easier to use
- Work this semester will benefit everyone

# Thank You & Acknowledgements

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