



ONTARIO UNIVERSITY REGISTRARS' ASSOCIATION

2008 Conference

LIFE CYCLE OF DEVELOPMENT – GATHERING REQUIREMENTS

Josie Lalonde and Terry Lago
University of Toronto – Student Information Systems

RAD/JAD Methodology is the current process used by SIS in project management

RAD – Rapid Application Development

- A development life cycle designed to be fast and provide high quality results.
- Focus is on solutions as opposed to problems; results oriented focused on providing deliverables.
- Short duration projects with well-defined scope.
- Direct user involvement to avoid miscommunication and reduce need for rework.

JAD – Joint Application Development

A philosophy of computer system development based on four simple ideas:

- People who work in a division or with a specific process have the best understanding of the business of that divisions/process.
- People trained in a programming language have the best understanding of its inherent possibilities and limitations.
- Computer systems and business processes rarely exist in isolation – they transcend the confines of a single system or office and all users in these areas may have valuable insight.
- The best computer systems are designed when all of these groups work together as equal partners.

A JAD team is therefore a group of people from these areas who have come together to develop a new system or enhance existing software.

JAD Team Members

Facilitator: Chairs JAD session(s) and guides discussion so that all important issues are addressed and all viewpoints heard. Introduces topic of JAD session, clarifies objectives, directs the meeting.

Project Leader: Works with Facilitator to ensure all important issues are addressed in JAD session(s). Is responsible for ensuring that the 'look and feel', navigation, language and existing system conventions are maintained. Manages project scope and coordinates the efforts of all team members.

User Experts: A user is anyone who uses, or may use, the system/process. Are often experts in various business processes and know what the finished software must be able to do (also what it must not do). Help analysts understand how the system should work, correct misconceptions, look for oversights and supply needed details.

JAD Team Members (cont'd)

The User Rep: is generally the 'lead' user contact for the development team and is responsible for collecting all requirements for the community at large. Often assists in the testing phase.

Scribe: is responsible for documenting information, ideas and conclusions of a JAD session.

Client Representative: Is the SIS expert in ROSI. Provides support to the user representative by helping them make decisions about the direction of the new development/enhancement and keeping them focused on their role. They assist in testing and requirements gathering. They also:

- Provide knowledge regarding current functions of the system.
- Share knowledge regarding new functions to the client services team.
- Develop training materials and data or revise existing materials.

JAD Meetings allow the project scope, business requirements and user concerns to be discussed.

Once direction is ascertained, and agreed to by all team members, the various members can then perform their separate roles (requirements gathering, coding, testing, etc.)

Regular status reports are provided at each stage of the project work and the testing/confirmation of the user requirements are ascertained through the development of prototype software.

Controlling Project Scope:

A definite deadline is applied to the project and is controlled through the use of a timebox.

The timebox is determined by three attributes of the project: time allotted, cost, scope. Time and cost are generally fixed values, while the scope may change (to either allow for greater or fewer requirements or more or less complexity) depending on how the project proceeds.

Timeboxing and the use of prototypes allow for the actual coding aspects of the project to proceed at an accelerated rate, while it may adversely affect the ability to meet all needs.

Requirements Gathering:

This type of project management entails the early identification of as many project requirements as possible.

These requirements must then be ranked ('must have', 'must not have', 'would be nice', 'not really necessary') in order to allow the team leads to know what pieces must be worked on first and are mandatory to the deliverable; what others may be jettisoned if time constraints arise, or added if time permits.

The focus is on the critical requirements: those deemed as 'must have', 'must not have' and that fit into the original scope of the project request.

Testing:

All prototypes are tested by team members (break testing by developers and regular business process testing by User Reps and Client Reps) to determine if it meets the project requirements.

Testing is an iterative process that may lead to several versions of the prototype until the finished product is achieved.

Benefits of RAD/JAD Methodology:

- Quick system development
- Small teams simplify project management and decision-making
- Solutions reflect user requirements as defined in the JAD
- Roles and responsibilities are clearly defined from the start
- Worked well for us when we needed a huge system rewrite
 - University of Ottawa system
 - Modified it to meet our specific business practices
 - Many divisions with diverse business practices and interests
 - Time crunch – Y2K
 - Real need for getting the most crucial work done quickly

Drawbacks of RAD/JAD Methodology:

- Incomplete user requirements
 - May not take time to clarify requirements or confirm assumptions
 - May not discover all user requirements
- May result in rework – costly back-tracking to correct earlier problems
- Incomplete or inconsistent documentation
 - No consistent method for recording changes to initial requirements
 - Technical specs at the end vs. business requirements up front
 - May lead to poor traceability – where did the requirement come from
- Users get what they need; but not always everything they want

Vision for the Future:

- 10 years later: Focus is now on smaller enhancements and fixes
- Adapting principles from the IIBA's BA BoK
- Take more time to gather business requirements at the front end
- Changing role of the client representative - business analyst
 - Managing projects
 - Developing and managing effective requirements
- Pilot project during 2008