



## eRA Project Team Retreat

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**Date:** Thursday–Friday, Oct. 9–10, 2003  
**Location:** Harbortowne Golf Resort & Conference Center, St. Michaels, Md.  
**Chair:** Dr. John McGowan

### Action Items

1. (All) Email Patty Austin to participate in the eRA Training Subcommittee.
2. (All) Review eRA Information and Support Handout and the eRA Outreach Brochure; email comments or send marked-up handout and brochure to Scarlett Gibb or Sandy Seppala.
3. (Project Team) Discuss lists generated from four workgroups and vote on top 10 priorities for FY04 at Project Team meeting.
4. (Danielle Bielenstein, Israel Lederhendler, Mike Loewe) Identify missing business areas in the proposed workflow.
5. (Danielle Bielenstein, Israel Lederhendler, Mike Loewe) Identify key ICs with whom eRA System representatives should meet to communicate this workflow pitch.
6. (Danielle Bielenstein, Israel Lederhendler, Mike Loewe) Work with Jack Jones to identify ICs that already have intervening steps in their IC systems.
7. (Scarlett Gibb) Present consolidated priority list to the Project Team on 10/28/2003.

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## Day 1

### Introduction and Overview

*Dr. John McGowan*

Presentation: [http://era.nih.gov/Docs/Setting\\_Expectations\\_McGowan\\_10-09-03.pdf](http://era.nih.gov/Docs/Setting_Expectations_McGowan_10-09-03.pdf)

### Welcome and Overview

*John (JJ) McGowan*

Dr. John McGowan welcomed all participants to the Retreat and thanked the eRA Communications and Outreach Branch for making such an event possible. JJ introduced several guests, including Jack Jones (Chief IT Architect, CIT), Charlie Havekost (E-Grants Program Manager, HHS), Ken Forstmeier (Director, Office of Research Information Systems, Pennsylvania State University), Arthur Petrosian (SRA in CRS), Mike Enea (Project Lead, RN Solutions), Mike Anderson (Project Lead, IBM), and two members of the Steering Committee (Brent Stanfield and Louise Ramm).

JJ explained that the goal of the Retreat is to agree on the Top 10 list of priorities for FY 2004. He reflected on the accomplishments of the Project in the last year, which include, among others,

100,000 logins to the NIH eRA Commons and the release of many applications (e.g., FSR, IAR, eSNAP, the Program Module, Web QT, and the budget components of QVR).

JJ encouraged participants to have a larger view of the eRA Project when setting priorities for FY 2004. He asked everyone to consider the following factors:

- *Budget pressures on NIH*—NIH is trying to cut costs and save money; this will mean additional scrutiny of the eRA budget. There is a strong battle to maintain current funding levels and an additional battle to grow the project. To protect the vision of eRA, it is essential to demonstrate that the eRA project is both well funded and monitored and that there are many opportunities to expand the eRA project for the benefit of the NIH and the Department of Health and Human Services.
- *A Broader Vision of eRA*—eRA is a research tool, not a grants processing system. eRA is the knowledge base of NIH; everything NIH does is contained in the eRA core dataset. However, to exploit what is in this research portfolio, it is essential to mine the data with intelligence and knowledge discovery tools. This vision of eRA needs to be illustrated to management.
- *Making eRA an Integrated Enterprise Solution*—Currently, eRA is not an integrated enterprise solution for the NIH or DHHS. OPDIVs and the NIH need to examine the return on investment and the potential of making eRA an integrated solution.
- *Additional requirements from DHHS, NIH*—These requirements may affect eRA priorities.
- *Lack of clarity concerning OPDIVs*—There is a lack of clarity for OPDIVs developing data marts between the different systems. eRA may be asked to develop reporting tools to manipulate these data marts. Funds may need to be secured to support this responsibility.

JJ asked participants to practice five essentials when setting priorities: be open, aware of environment, truthful, connected, and committed.

Finally, JJ announced his resignation as Project Manager of the eRA Project. He thanked the project members for their tremendous efforts and vision, and explained his intention to serve the project in a more indirect capacity. JJ's resignation will take effect in January.

## **Current Status of eRA Project**

*Scarlett Gibb*

Presentation: [http://era.nih.gov/Docs/eRA\\_Status\\_Gibb\\_10-09-03.pdf](http://era.nih.gov/Docs/eRA_Status_Gibb_10-09-03.pdf)

## **FY 2003 Achievements**

The eRA project has accomplished a great deal in FY 2003, including the production of IAR, one full year of successful scanning, 100,000 total logins to the NIH eRA Commons, and the release of many new applications (NIH eRA Commons Version 2, FSR Module for the Web, eSNAP Pilot, Program Module, iEdison Version 2, CGAP pilot, and the Web QT pilot).

## **eRA Communications and Outreach Update**

The eRA Communications and Outreach Branch continues to publish documentation about the eRA Project and to provide quality instruction that enables NIH and grantee institution users to

make effective and efficient use of the eRA system. Documentation includes meeting minutes, system manuals, online help, and two monthly newsletters (*Inside eRA* and *Inside eRA for Partners*). Training methods include demonstrations, Web Casts, hands-on labs, quick tips, lectures, presentations, exhibits, informative handouts, and the eRA Virtual School (<http://era.nih.gov/virtualschool/>). Currently, the Virtual School features tutorials for FSR and the Committee Management (CM) Module; a Program Module tutorial will be available in the near future.

This year, COB hosted more than 18 staff training sessions at NIH with over 2,900 people in attendance. Training sessions were held on IAR, the Program Module, Web QT, and the Committee Management (CM) Module. COB also held training sessions for Principal Investigators and Research Staff in ten states with over 2500 people in attendance.

Scarlett explained that a training subcommittee is needed to help continue the creation of new and inventive training strategies. She asked individuals interested in serving on the subcommittee to email Patty Austin. The subcommittee needs to represent every business area at the NIH so all volunteers are welcome.

Finally, Scarlett asked participants to review and provide comments on the eRA Information and Support handout and the eRA Outreach Brochure, both of which are included in the eRA retreat packet. Comments should be forwarded to Scarlett Gibb or to Sandy Seppala.

**Action: (All) Email Patty Austin to participate in the eRA Training Subcommittee.**

**Action: (All) Review eRA Information and Support Handout and the eRA Outreach Brochure; email comments or send marked-up handout and brochure to Scarlett Gibb or Sandy Seppala.**

## **Grants System: Competition and Survival**

*Charles Havekost, Grants.gov Program Manager, Department of Health and Human Services (HHS)*

Presentation: [http://era.nih.gov/Docs/Grants\\_Systems\\_Havekost\\_10-9-03.pdf](http://era.nih.gov/Docs/Grants_Systems_Havekost_10-9-03.pdf)

Charlie Havekost said that the NIH is one of two agencies within the Department that is considered a “Center of Excellence”. In addition, the NIH electronic Research Administration (eRA) System is recognized in the Department as the “best of breed” for grants administration.

Charlie asked Retreat attendees, “How are we ensuring technical decisions will survive in the future in an environment of global competition?” He said that it is important that the eRA Project Team know the competition, the target market and its core business. It would be advantageous to be able to cite why some, but not all, agencies are using the eRA System. He told the attendees to think about the business flow, for example:

- **Define the interfaces.** Grants.gov can serve to define the interfaces.
- **Develop a modular system.** Authentication is an example of a modular function within the system.
- **Consider outsourcing tasks.** Be prepared to use external services to get out of non-core parts of the business.

- **Recognize that implementation may drive policy.** Look at components or parts of the eRA System that could work across the government. (visit [www.feapmo.gov](http://www.feapmo.gov))
- **Think about personal growth.** Re-usable knowledge is valuable knowledge.

In conclusion, he said that to survive, the Project Team should be able to relate its core business, which is what it does best, to the Office of Management and Budget (OMB). The team should tell its story or explain its purpose and functions before OMB or some other entity defines an agenda for eRA. A good place to relate the mission is in Public Law 106 and 107 under the HHS consolidation section.

## **Expectations, Results, and Appeals: Notes from (the Grantee) Underground**

*Ken Forstmeier (Director, Office of Research Information Systems, Pennsylvania State University and Commons Working Group member)*

Ken premised his presentation with the caveat that he could neither represent the “faculty perspective” nor that of the institutional community because there are so many disparate perspectives. This said, Ken said that he provides support to all Penn State faculty and research administrators. He said, tongue-in-cheek, that the perspective of many faculty members boils down to: *Give us the money, preferably in cash, and trust us.*

Working with faculty and with a myriad of outside institutions with whom they work, Ken constantly must manage conflicting electronic-system and application requirements. Government agencies are a good case in point for conflicting requirements—not to mention the 27 institutes at the NIH. He highly recommended that the NIH and the government work together to develop one interface with a single, shared infrastructure for user administration so that anyone can submit an application and be assured that it will be processed accurately by the correct agency. This would mean instituting controlled change management systems with data validation and business rules.

Ken thought that Grants.gov was a step in the right direction, particularly with respect to interagency politics and innovative funding strategies. He noted that, contrary to the norm for technology projects, Grants.gov not only prevented scope creep but also managed to manifest negative scope creep to manage expectations in a shifting political and technical environment. The NIH eRA Commons is another step in the right direction, particularly with its emphasis on rebuilding back-office infrastructure (IMPAC to IMPAC II) and its use of previously proposed architectures (Federal Commons to NIH eRA Commons). He said that NSF’s FastLane was a good system and it will be around for a few years to come. However, it is based in older technologies.

As a university, Ken has seen that some agencies have systems that don’t work well at all (e.g., contract system for grants), but if the university wants the money, it has to use the system. He also suggested that many agencies unilaterally develop grants systems (instead of committing these resources to the Grants.gov effort) because laws and regulations hold the individual agency responsible for implementation; he thought this response was understandable but, unfortunately, contributed to the proliferation of grants systems. He also stressed that the proliferation of agency systems continues to be a burden on the research community.

Ken suggested the following priorities that should be on the top of the project list:

- Migration of agency systems to Grants.gov
- Development of a shared system for data entry that includes eAuthentication, and institution and person profiles
- Define and implement a change management process that is controlled and predictable
- Implement a single, government-wide, system for attachments
- Grants.gov:
  - Platform independent or accommodate more platform types
  - Implement system-to-system transactions
- Presuming a successful CGAP XML pilot, migrate the system to Grants.gov
- Continue and broaden collaboration with Grants.gov, especially with respect to XML schema and generalization of data
- Cost concern: who is going to pay for the issuance of certificates?

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## Day 2

### Workgroup Reports and Feedback

Retreat participants were assigned to one of four workgroups: *New Needs, Policy and Legislation Mandates, Migration and Current System Maintenance*. Each group worked together for three hours on Day 1 to address their specific issue and to agree upon a Top 10 FY04 list of priorities. A representative reported the results of the workgroup sessions.

The participants did not vote for the Top 10 FY04 eRA priorities. Although identifying top 10 priorities was the goal of the retreat, JJ felt that the discussions the last two days were more fruitful and helpful overall. He suggested that the Project Team further discuss the four lists of priorities generated by the four workgroups and vote at a Project Team meeting.

**Action: (Project Team) Discuss lists generated from four workgroups and vote on top 10 priorities for FY04 at Project Team meeting.**

#### Group 1: Identify New Needs (Framing Business Needs)

*(eRA Working Toward an Enterprise Solution to Research)*

Mike Loewe

Presentation: [http://era.nih.gov/Docs/Group\\_1\\_Define\\_New\\_Needs\\_10-09-03.pdf](http://era.nih.gov/Docs/Group_1_Define_New_Needs_10-09-03.pdf)

*How many times have you heard “I wish the system would ...” or “Wouldn’t it be great if we had a module that ...”? In Project Team meetings, user group sessions, internal meetings and offline discussions we have all been exposed to new ideas for functionality that would make the eRA system a more robust enterprise solution (e.g., OER module, council module). These initiatives are big-hitters with the potential to change the way we do business. To prepare for this discussion, talk to your user groups and colleagues and gather your thoughts for new innovative enhancements. All ideas are welcome.*

The general consensus of the Group 1: Defining New Needs discussion was that the eRA team needs to rethink the way we are structured organizationally. In addition, we need to support greater interactions between business areas. And finally, we need an integrated solution to doing business with other government entities.

This consensus was identified after group participants offered individual suggestions on the eRA System’s performance needs. The suggestions became the new performance goals (shown in the chart below). These goals were then mapped to the eRA OMB 300 and Government Performance Results Act (GPRA) goals. The group then established performance measurements for each new performance goal that would create a foundation for an eRA strategic plan.

### Top Ten Performance Needs List

*(Items are not prioritized.)*

Item	GPRA Goal	New Performance Goal	Performance Measurements
1	Enhance the quality, availability and delivery of HHS information and services to citizens, employees, businesses, and governments.	Enhance eRA system to present an enterprise-based user experience	<ul style="list-style-type: none"> <li>▪ Global access to all NIH Systems (single sign-on)</li> <li>▪ Migration to J2EE</li> <li>▪ Transition from a “module-based” interface to an eRA interface (e.g., common view for GM, PGM, Review, Budget)</li> <li>▪ Subscription Services</li> </ul>
2	Enhance the quality, availability and delivery of HHS information and services to citizens, employees, businesses, and governments.	Better accounting of NIH research dollars by tracking NIH-sponsored scientific workforce	<ul style="list-style-type: none"> <li>▪ Track co-investigator and other key personnel in eRA system</li> </ul>
3	Enhance the quality, availability and delivery of HHS information and services to citizens, employees, businesses, and governments.	Enhance the flexibility and accessibility of eRA data	<ul style="list-style-type: none"> <li>▪ IRDB redesign (in context of defining/refining and eRA data architecture)</li> </ul>
4	Enhance the quality, availability and delivery of HHS information and services to citizens, employees, businesses,	Enhance and modernize public reporting	<ul style="list-style-type: none"> <li>▪ Enhanced “CRISP” functionality</li> </ul>

	and governments.		
5	Implement and end-to-end capability for the electronic administration of grants.	Electronic processing of a grant application from receipt through destruction (i.e., destroy date)	<ul style="list-style-type: none"> <li>▪ Workflow (includes e-Notification capability)</li> </ul>
6	Implement and end-to-end capability for the electronic administration of grants.	Business process re-engineering for end-to-end grant application processing.	<ul style="list-style-type: none"> <li>▪ Integrate initiatives (RFAs, PAs, etc.) into eRA system. Includes ENS, Budget tracking, etc.</li> <li>▪ Electronic ARAs, 901s, NRSAs, e-NAPS</li> <li>▪ J2EE Grant Folder (Records Management/Retention Policies)</li> <li>▪ Support of resubmissions and additional information</li> </ul>
7	Implement and end-to-end capability for the electronic administration of grants.	Integrate IC budget process into eRA.	<ul style="list-style-type: none"> <li>▪ Real-time obligation between the accounting systems and eRA</li> <li>▪ Convert data from mainframe to eRA system in a more efficient way</li> </ul>
8	Implement and end-to-end capability for the electronic administration of grants.	Integrate knowledge management and related vocabulary/thesaurus into eRA.	<ul style="list-style-type: none"> <li>▪ Restructure CGAP data to enable rapid referral, query and analysis (e.g., use of Specific Aims and Abstract to refer to the IRG and funding IC)</li> </ul>
9	Implement and end-to-end capability for the electronic administration of grants.	Generic means for creating relationships between entities in eRA system.	<ul style="list-style-type: none"> <li>▪ Organizational hierarchy</li> <li>▪ Flexible assignment of applications to a variety of users</li> </ul>
10	Implement and end-to-end capability for the electronic administration of grants.	Receive grant applications and related transactions as digital data stream. (This is a current OMB 300 Performance Goal.)	<ul style="list-style-type: none"> <li>▪ CGAP Enhancements <ul style="list-style-type: none"> <li>– Transition to production</li> <li>– Populate GM budget spreadsheets with CGAP data</li> <li>– Identification of</li> </ul> </li> </ul>

			collaborating institutions
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Some final thoughts:

- Need to look beyond FY04 to manage user expectations.
- eRA has new performance goals that need to be refined after the retreat.
- Need to formulate a 3–5 year plan based on the refined goals.
- Use the information gathered at the 2003 eRA Project Team retreat to reset the eRA vision to make the eRA system a more robust enterprise solution to research.

## Discussion

**Missing Data**—Carlos Caban raised the point that there is certain data that currently is not captured in IMPAC II that should be. He emphasized the importance of identifying this missing data and collecting it as soon as possible.

**Metrics Approved**—JJ approved of the group’s identification of performance metrics. He explained that OMB scrutinizes documents, particularly performance goals, so it is essential that eRA’s FY 04 priorities demonstrate trans-department initiatives.

## Group 2: Mandated by Policy and Legislation

*Israel Lederhendler*

Presentation: [http://era.nih.gov/Docs/Group\\_2\\_Policy\\_10-09-03.pdf](http://era.nih.gov/Docs/Group_2_Policy_10-09-03.pdf)

*As part of a larger HHS community, eRA often must accommodate requirements that result from political drivers (e.g. Dr. Zerhouni mandates, OPDIV demands, Grants.gov, etc.). We hear about these requirements in meetings, in emails and articles, in discussions with colleagues and many other sources. What key drivers will affect eRA in 2004? How do they fit within the eRA system? What future initiatives are on the horizon that we can start laying the groundwork for?*

Group 2 identified several key political drivers that will affect eRA in 2004, including A-76, the Department of Health and Human Services consolidation, e-commerce directives, Dr. Zerhouni mandates, e-gov e-authentication initiative and privacy act, and the NIH architectural policy. The group then developed the following list of top ten priorities that address those drivers. The retreat participants approved the top 10 list of priorities without revision.

1. Expand and support the Commons and electronic receipt.
2. Identify and address implications of broader grants.gov initiatives (standard data sets, one application form, etc.)
3. Implement Organizational Layers and Delegations
4. Develop and implement a suite of workflow support tools (e.g., E-notification, e-requests) to support cross-business areas and cross-institute commonalities.
5. Implement flexibility to integrate OPDIVs (e.g., Configurable NGA, reconfiguring Receipt and Referral, and RFA/PA processing).



6. Fully align and expand person and institution profile and involvement information with government standards and directives and centralize administration.
7. Clearly define the scope of eRA as a research tool versus a reporting tool (e.g., Inclusion of contract and intramural data).
8. Continue to be proactive and diligent concerning security and latest authentication standards and policies.
9. Exchange of other types of XML transactions such as e-NAP, FSR, NGA profile, etc.
10. Electronic grant folder, e-records management

### **Group 3: Migration—C/S, J2EE**

*Steve Hughes, Krishna Collie*

Presentation: [http://era.nih.gov/Docs/Group\\_3\\_Migration\\_10-09-03a.pdf](http://era.nih.gov/Docs/Group_3_Migration_10-09-03a.pdf)

*Migrating the remaining Client/Server applications to J2EE is an important task for the eRA project to complete. In addition to the inefficiencies of maintaining software, hardware, and skill sets in multiple platforms, Client/Server applications cannot take advantage of shared components or improved user interfaces developed for J2EE applications.*

*What are the most critical migration activities that must be completed? What migration activities must be completed to develop needed enhancements? Discuss the challenges of migration and the criteria for prioritizing.*

Dan Hall and Patty Austin set the stage for the discussion with a few slides covering the Top 10 Real Reasons to Migrate to J2EE (in David Letterman style), risks associated with not migrating, and migration strategy considerations.

Slides: [http://era.nih.gov/docs/Group\\_3\\_Migration\\_discussion\\_starter.pdf](http://era.nih.gov/docs/Group_3_Migration_discussion_starter.pdf)

General discussion points:

- The team quickly decided that the real topic of conversation should be how to keep up with current “mainstream” technology. Client-Server and J2EE happen to be the “from what” and “to what” today, but it is a continuous process to keep current and not a one-time hit.
- Moving forward, it is important to plan and design for the future foundation of the system to minimize future investment.
- Need to separate the functionality of the system from the technology it runs in and investigate tools that will allow transparent transition to new technologies.
- Need to incorporate at least a small amount of new functionality and business process reengineering (BPR) into the migration effort to gain buy-in.

Priority setting discussion points:

#### **Shared Components**

No	Component	Discussion
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No	Component	Discussion
1	<b>Person module</b>	<ul style="list-style-type: none"> <li>▪ All systems use people data</li> <li>▪ The NIH Director and other senior staff have placed emphasis on the ability to track project key personnel and co-principal investigators</li> <li>▪ Needed to support the single point of ownership policy</li> <li>▪ Needed to implement a re-engineered profile/role structure</li> </ul>
2	<b>Org Hierarchy</b>	<ul style="list-style-type: none"> <li>▪ Needed for the definition of internal IC organizational structures</li> <li>▪ Needed for the definition of external research organizational structures</li> </ul>
3	<b>E-Request</b>	<ul style="list-style-type: none"> <li>▪ 901s and ARA</li> <li>▪ Tied into CGAP</li> </ul>
4	<b>Single Sign-on</b>	<ul style="list-style-type: none"> <li>▪ Requested by external community</li> <li>▪ Needed to “ease the pain” of jumping between eRA applications (i.e., eliminates the need for multiple logins)</li> <li>▪ Requires application (menu) redesign</li> </ul>
5	<b>E-Notification</b>	<ul style="list-style-type: none"> <li>▪ CGAP</li> <li>▪ Mailers</li> <li>▪ SS</li> <li>▪ Workflow</li> </ul>

### Functional Components

No	Component	Discussion
1	<b>Grants Management</b>	<ul style="list-style-type: none"> <li>▪ GM BPR and application redesign is needed</li> <li>▪ A key business area for records management</li> <li>▪ Makes awards</li> <li>▪ Official grant file</li> <li>▪ MEO A-76</li> <li>▪ Common grant file for NIH</li> </ul>
2	<b>Trainee Appointments</b>	<ul style="list-style-type: none"> <li>▪ TA BPR and application redesign is needed</li> <li>▪ Needed to track fellowships and key personnel</li> </ul>

No	Component	Discussion
		<ul style="list-style-type: none"> <li>Provides “cradle to grave” tracking mechanism trainees career in grants</li> </ul>
3	<b>Committee Management/Peer Review</b>	<ul style="list-style-type: none"> <li>CM BPR and application redesign needed</li> <li>Main admin tasks for getting grants processed</li> </ul>
4	<b>Population Tracking</b>	<ul style="list-style-type: none"> <li>Integrated with GM, Commons, and Program</li> </ul>
5	<b>Receipt &amp;Referral</b>	

## Discussion

*New Title for Trainee Appointments*—JJ McGowan asked that “Trainee Appointments” (one of the functional components selected for migration to J2EE) be renamed to “Tracking NIH Scientific Workforce.” This title best illustrates our priority to track key personnel and co-investigators to management. We need to project the correct image.

*Client-Server/J2EE Hybrids*—The group agreed that the first step toward migration is to first convert Client-Server applications into J2EE, then add functionality. Also, Sherry Zucker raised the point that client-server applications simply cannot be converted to J2EE applications. Rather, during the migration, several applications may be a hybrid of client-server and J2EE. This is to be expected.

## Group 4: Current System Maintenance

*David Wright, Scarlett Gibb*

Presentation: [http://era.nih.gov/Docs/Group\\_4\\_Maintenance\\_10-09-03.pdf](http://era.nih.gov/Docs/Group_4_Maintenance_10-09-03.pdf)

*Balancing maintenance needs with new development is a concern of all large development projects. Resources are limited and it is not always practical to continue to expend resources on applications that will be migrated or retired in the near future.*

*What systems should be maintained in 2004? Consider the risks associated with the decision to not maintain certain systems. Discuss the challenges of maintenance and the criteria for prioritizing.*

Workgroup 4 defined maintenance as follows and used this definition as a basis for its evaluation of eRA modules, both client/server and J2EE:

*Maintenance: existing module, correct bugs, maintain functionality, business goals, tool upgrades, no new module or redesign.*

Additionally, the group developed a set of criteria, designated either benefit or cost, by which to evaluate each module.

### Maintenance Criteria by Cost and Benefit

Benefit	Cost
<ul style="list-style-type: none"> <li>Usage</li> </ul>	<ul style="list-style-type: none"> <li>Support/training</li> </ul>

Benefit	Cost
<ul style="list-style-type: none"> <li>▪ Are there alternatives/workarounds? Is there another way to meet the business goal?</li> </ul>	<ul style="list-style-type: none"> <li>▪ Where is it in the redesign schedule?</li> </ul>
<ul style="list-style-type: none"> <li>▪ Image.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Is it mandatory?</li> </ul>
<ul style="list-style-type: none"> <li>▪ What is the impact? What are the benefits?</li> </ul>	<ul style="list-style-type: none"> <li>▪ Resource cost</li> </ul>
<ul style="list-style-type: none"> <li>▪ What value do we place on business-process redesign/reengineering?</li> </ul>	<ul style="list-style-type: none"> <li>▪ Cost dollars</li> </ul>
<ul style="list-style-type: none"> <li>▪ Is it reusable? Is it cross-cutting?</li> </ul>	<ul style="list-style-type: none"> <li>▪ Cost of lost opportunity</li> </ul>

### Recommendations

**Client/Server**—We hold client-server maintenance to a 5 percent goal of the overall funds for software development. Flexibility is an option realizing not meeting this goal will take away from new development.

**J2EE (maintenance on deployed functionality)**—We hold J2EE maintenance to 15 percent of the overall funds for software development dependent upon how we define version control.

**Note:** The recommendations are based on maintenance between major version releases.

**Assumption:** Independent components can be released if they don't impact the overall enterprise system.

Modules and Reporting Tools were categorized specifically into four areas:

1. Work new requirements for enhancements, bug fixes
2. All bug fixes, limited enhancements, policy requirements
3. Critical bug fixes only
4. No maintenance

### Client/Server Maintenance

There were no listings under category 1, *Work new requirements for enhancements, bug fixes*.

2. All bug fixes, limited enhancements, policy requirements	3. Critical bug fixes only	4. No maintenance
<ul style="list-style-type: none"> <li>▪ GUM</li> <li>▪ iEdison</li> <li>▪ Peer Review</li> <li>▪ Person Module</li> </ul>	<ul style="list-style-type: none"> <li>▪ CM</li> <li>▪ GM</li> <li>▪ Grants Payment Management</li> <li>▪ ICO</li> </ul>	<ul style="list-style-type: none"> <li>▪ CRISP on the Web (depending on the IRDB redesign)</li> <li>▪ CRISP Plus (dependent on Subprojects)</li> <li>▪ Grant Folder (depending on</li> </ul>

2. All bug fixes, limited enhancements, policy requirements	3. Critical bug fixes only	4. No maintenance
<ul style="list-style-type: none"> <li>▪ RR</li> </ul>	<ul style="list-style-type: none"> <li>▪ Pop Tracking (if migrated to Commons)</li> <li>▪ System infrastructure utilities (API, batch jobs, bridges, common mailer, etc.)</li> <li>▪ Trainee Appointments</li> <li>▪ IRDB</li> </ul>	<ul style="list-style-type: none"> <li>migration)</li> <li>▪ ICSTORE</li> <li>▪ IQR</li> <li>▪ QuickView</li> <li>▪ SITS</li> <li>▪ Subprojects (with redesign within 10 months)</li> <li>▪ User Admin (OPDIVs and A76 may require changes but were not costed in)</li> <li>▪ X-Train</li> </ul>

### J2EE Maintenance

There were no listings under category 1, *Work new requirements for enhancements, bug fixes* and category 4, *No maintenance*.

2. All bug fixes, limited enhancements, policy requirements	3. Critical bug fixes only
<ul style="list-style-type: none"> <li>▪ CGAP</li> <li>▪ CGAP—RR</li> <li>▪ Checklist</li> <li>▪ CM Web</li> <li>▪ Commons Status</li> <li>▪ Grant Folder</li> <li>▪ IC Admin Module</li> <li>▪ iEdison</li> <li>▪ PGM</li> <li>▪ PPF</li> <li>▪ Web QT</li> <li>▪ IAR</li> </ul>	<ul style="list-style-type: none"> <li>▪ Account maintenance</li> <li>▪ eSNAP</li> <li>▪ FSR</li> <li>▪ Grants Closeout</li> <li>▪ Institution registration</li> <li>▪ IPF</li> </ul>

## Discussion

**IRDB**—Pete Morton expressed concern about the categorization of IRDB under “No maintenance/Phased Retirement). He said that it would not be wise to drop the maintenance of the current IRDB until the redesigned IRDB is well underway. Jim Cain asked Pete if he was expecting funding for the redesign from eRA. Pete said that he is indeed expecting funding from eRA. The group agreed that IRDB should remain in category four (No maintenance-phase retirement) as long as the IRDB redesign has begun by March/April 2004. If the redesign has not begun, IRDB should be moved to the third category “Critical Bug Fixes.”

**Subprojects**—Sherry Zucker expressed concerned about placing subprojects under “No maintenance/Phased Retirement.” She asked that it be moved to “Critical Bug Fixes.” The group decided to leave subprojects in category four (No maintenance/Phase retirement) as long as the redesign has begun in ten months. If the redesign is not underway in ten months, subprojects will move to the third category (Critical Bug Fixes).

**Maintenance Cost Allocation**—Jim Cain asked for a clear decision on Group 4’s proposed software development budget for client server maintenance (5%) and J2EE maintenance (15%). Retreat participants agreed that 5 percent of the software development budget should be allocated to client-server maintenance and 15 percent to J2EE maintenance. However, participants also decided that these numbers should be flexible and that if need be, funds from the J2EE maintenance budget should be allocated to the client-server maintenance budget.

## An Advocate Team Approach to developing an eRA System for New and Competing Grants

*Danielle Bielenstein, Israel Lederhendler, Mike Loewe*

Presentation: [http://era.nih.gov/Docs/Team\\_Approach\\_Lederhendler.pdf](http://era.nih.gov/Docs/Team_Approach_Lederhendler.pdf)

## An Advocate Team Approach to Developing an eRA System for New and Competing Grants

*Danielle Bielenstein, Israel Lederhendler, Mike Loewe*

The presenters suggested the using of a model that looks at the grants process from an actual workflow view, rather than from an eRA module view. It pulls in Payline Policies, organizational layers, the data warehouse, budget policies, among other key mileposts. The model encompasses a “big-picture” view of the enterprise system that includes *Fixed Events*, *IC-Modifiable Business Practices*, and *Workflow*.

They asked the Retreat participants to examine the workflow and determine the fixed points in the flow in which all ICs have to engage. Then, they were asked to determine how IC requirements differ at these fixed points.

In the accompanying chart, red indicates features of the system that require IC-customizable elements. The blue line indicates business areas to be integrated into a workflow solution. The experience of working with Advocates from different business areas led to greater awareness of the importance of certain business problems. For example, end-of-year reconciliation is a major issue for GM and Budget, and it affects Program. In other words, this integrated workflow approach could eliminate “stovepiping” and, instead, encourage a more seamless and cooperative workflow within ICs and between people with various “roles” in the process.

The Retreat participants suggested that eRA System modules be fitted into the workflow. The consequences of this approach for eliminating stovepipes will be considered very carefully. JJ McGowan asked that cost, functionality and usability be considered. It was also suggested that intervening steps should be identified, particularly at the IC level.

The presenters also speculated that the disconnect between enterprise and some IC-level systems may become bigger in the future so it is important that the eRA System present the same look and feel for all of its modules, e.g. Web QT, organizational layers and Status.

Jack Jones asked that the workflow graphic be modified to use standard workflow symbols, e.g., a circle might mean data, a box a module. This would help an architect to interpret the workflow.

The participants indicated that it was important that Budget buy into this workflow. Rick Ikeda noted that the QVR has been working with Budget and has developed a number of their requested reports.

The presenters following items were thought to be potentially appealing to ICs:

- eRA recognizes that ICs are a community looking at an enterprise system.
- The eRA System team can build the intervening steps of an overall enterprise system that works for all ICs. Help us build this.

**Action: (Danielle Bielenstein, Israel Lederhendler, Mike Loewe) Identify missing business areas in the proposed workflow.**

**Action: (Danielle Bielenstein, Israel Lederhendler, Mike Loewe) Identify key ICs with whom eRA System representatives should meet to communicate this workflow pitch.**

**Action: (Danielle Bielenstein, Israel Lederhendler, Mike Loewe) Work with Jack Jones to identify ICs that already have intervening steps in their IC systems.**

## **Re-compete Update**

*Jim Cain*

Jim noted that for the past year, the eRA management team has been reassessing business practices. For some functions (e.g., user support), there are multiple contractors performing the same work. For others (e.g., development), there is a single contractor with no competitive incentives.

Jim noted that the contract with Northrop Grumman Information Technology (NGIT) is due to expire on November 30 and it is a natural time to implement a new project strategy. There will be an overlap of contracts to facilitate a smooth transition. A cost and time extension to the contract can be implemented as a contingency if there is insufficient transition time.

Jim noted that the management team is maintaining an extensive risk list with mitigation strategies to provide system stability throughout the transition period. However, despite best efforts, the transition period may still bring adverse effects to users and he asked for patience as the team works through any issues that may surface. He hopes the project will be in a “steady” state again by January.

Four new contract areas have been identified:

- **Integration:** Awarded to IBM Business Consulting Services
- **Operations:** Awarded to RN Solutions
- **User Support:** Request for quotes out; announcement will be made very soon
- **Design and Development:** Original request for quotes has been cancelled (insufficient time allotted to obtain a good cross-section of candidates). A new request has gone out and awards will take place in November. Looking for 3–4 vendors that will be “pre-approved” to bid on task orders.

## **eRA Deployment Strategy**

*Jim Cain*

Jim reported that the project is moving away from calendar-driven planning to more strategic planning. He noted that a few years ago, eRA operated primarily as a development shop with a small pilot user base and frequent releases. As more and more modules moved from development to pilot to production, deployments gradually became less frequent and more carefully planned but remained date driven. Now that the eRA project has transitioned to a full production shop, the date-driven methodology no longer makes sense.

The eRA team has been selecting a release date and working back from that date to determine schedule milestones. Release dates are often met by sacrificing functionality or compressing key steps in the process. Now that the project is more mature, Jim would like to take a more strategic approach to scheduling. He has instructed his team to take the time necessary to work through the appropriate planning steps (prioritize open requirements, determine cost/time estimates, perform architecture and budget reviews, create a detailed project plan) and to begin working the plan. As the team works through the process the target release date will become better defined (Fall ... November ... November 7). Jim expects the number of major functional releases will be reduced to 1–2 per year.

To resolve production issues in a timely manner, maintenance work will be separated from major functional releases. Maintenance activities will be bundled, tested, and released as needed throughout the year. Automated testing is a key requirement for quick turnaround of maintenance releases. Jim reported that an automation tool has been purchased and that training and scripting is underway. It is the goal of eRA to have automated testing in place by early spring.

## **Knowledge Management: Computerized Reviewer Assignment**

*Richard Morris*

[http://era.nih.gov/Docs/Knowledge\\_Mgt\\_Morris\\_10-09-03.pdf](http://era.nih.gov/Docs/Knowledge_Mgt_Morris_10-09-03.pdf)

Richard Morris introduced the topic of Knowledge Management, showing how it can be used at the NIH. Eileen Bradley moderated two presentations that illustrate practical applications that are being used today that take advantage of knowledge management concepts.

## **Knowledge Management's Role in Resetting the Vision**

*Bob Lewis, PhD, Director, Mitretek Systems*

Presentation: [http://era.nih.gov/Docs/KM\\_Projs\\_Bob\\_Lewis\\_10-10-03.pdf](http://era.nih.gov/Docs/KM_Projs_Bob_Lewis_10-10-03.pdf)



Dr. Lewis gave an overview stating that knowledge management involves the mining of text as well as expertise location and collaboration. Dr. Lewis explained how key information can be extracted from the research proposals and manipulated using knowledge management tools to identify trends and provide information to support executive decision-making. Vocabularies and fingerprints can be extracted using the MeSH taxonomy and thesaurus and then merged to create a proposal archive. The system may be used to augment searches based on reviewer assignment, scientific trends, clinical relevance, and investment level analysis. Dr. Lewis said that the potential advantage of this system is that it could significantly reduce the time required to process a proposal while also having a favorable impact on the quality and efficiency of the overall process.

### **Computerized Reviewer Assignment & Search Program (CRASP®)**

*Arthur Petrosian, Ph.D., CSR*

Presentation: [http://era.nih.gov/Docs/CRASP\\_Petrosian\\_10-09-03.pdf](http://era.nih.gov/Docs/CRASP_Petrosian_10-09-03.pdf)

Arthur Petrosian presented the Computerized Reviewer Assignment & Search Program (CRASP) that he and his son developed. Art said that developed the program to search for reviewers for his specific *ad hoc* diagnostic imaging study sections. CRASP gives a way to search reviewers based on keywords that are not necessarily in a MeSH taxonomy yet. In addition, it provides re-mapping between MeSH and CRISP keywords for a more accurate match between applications and reviewer expertise. It also allows one to perform automatic optimized assignments for selected reviewers, which is more efficient and offers better results than the way SRAs currently make assignments. Assignments are presently made manually. At present, SRAs are consulting colleagues and past reviewers to find for potential reviewers. CRASP would allow SRAs to get their jobs done faster and potentially could allow a reduced number of required reviewers for a particular study section. CRASP offers the flexibility that the NIH is looking for to accompany the NIH Roadmap initiative.

Other items:

- Other federal agencies are using Knowledge Management. Mitretek has been approached to have a joint conference in 2004.
- JJ asked the presenters to write the functions of their programs to be included in a briefing to Dr. Zerhouni. JJ would like to show Dr. Zerhouni their capabilities and the things we are not doing because of a lack of funding.

## **Closing Remarks**

*JJ McGowan*

JJ thanked the group for their participation in the retreat. He pointed out that the level of team member interaction and open discussion surpassed what he had seen in previous years and was encouraged by the team's commitment to the project.

JJ asked Jim Cain's staff to take the priority lists created by the break-out groups, consolidate them and come back to the Project Team to finish the great work started at the retreat.

**Action: (Scarlett Gibb) Present consolidated priority list to the Project Team on 10/28/2003.**

JJ acknowledged the many challenges ahead as we strive to realize the vision of becoming a comprehensive NIH research tool. He re-emphasized the importance of getting some of the initiatives discussed off the ground, out of pilot and into production.

JJ thanked the facilitators for their assistance in making the retreat a success and for their fun and insightful group activity that combined snippets of the movie *Down Periscope* with a presentation entitled *Creating a High Performing Organization: A System Approach*.

## Attendees

Anderson, Mike (IBM)	Goodman, Michael (OD)	Ramm, Louise (NCRR)
Armistead, Allyson (LTS)	Grandy, Vanessa (OD)	Ratnanather, Chanath (OD)
Austin, Patti (OD/OER)	Hahn, Marcia (OER/OPERA)	Salzman, John (OD)
Bielenstein, Danielle (FIC)	Hall, Dan (OD)	Schaffer, Wally (OD)
Bradley, Eileen (CSR)	Hasan, Choudhury (OD)	Schwartz, Chip (CoreSoft)
Burns, Amy (LTS)	Hausman, Steve (NIAMS)	Seppala, Sandy (LTS/OCO))
Caban, Carlos (OER)	Havekost, Charlie (HHS)	Shingler, Felicia (OD)
Cain, Jim (OER)	Hughes, Steve (OD)	Siebert, Mark (OD)
Chicchirichi, David (OD)	Ikeda, Rick (NIGMS)	Silver, Sara (OD)
Collie, Krishna (RN Solutions)	Jones, Jack (CIT)	Silverman, Jay (NGIT)
Copeland, Zoe-Ann (OD/OER)	Koshy, Maria (OD)	Snouffer, Anna (OD)
Cox, Mike (OD)	Lambert, Chris (OD)	Soto, Tracy (OD/DEIS)
Cummins, Sheri (LTS)	Lederhendler, Israel (NIMH)	Stanfield, Brent (CSR)
D'Amico, Al (NGIT)	Liberman, Ellen (NEI)	Stelle, Carolyn (OD)
Diggs, Lana (OD)	Loewe, Michael (NINDS)	Thomson, Alastair (Blueprint Technologies)
Dixon, Diana (OD)	Lynch, Peggy (OD)	Tucker, Jim (OER)
Dutcher, Sylvia (Mitretek)	Markovitz, Paul (OD)	Twomey, Tim (OD)
Ellis, Joe (OD)	Maurer, JJ (OD)	Walker, Cathy (OD/OER)
Enea, Mike (RN Solutions)	McGowan, John (NIAID)	Wilson, Mike (NGIT)
Fadeley, Vickie (OD)	Moore, Bob (OD/OER)	Wright, David (OD/OPERA)
Forstmeier, Ken (Penn State)	Morris, Richard (NIAID)	Zucker, Sherry (OD/DEIS)
Gaines, Patti (OD)	Morton, Pete (CIT)	Zhen, Changqing (OD)
Ghassemzadeh, Ali (OD)	Patel, Kalpesh (Ekagra)	
Gibb, Scarlett (OER)	Pearson, Johnnie (Z-Tech)	
	Petrosian, Arthur (CSR)	