eRA Project System Update

- Health of the Project
- Moving Forward
- Budget
- Future Directions
Like Us—the eRA Project is in Good Health but:

- Under stress, tension because of
  - Rolling out applications and functionality
  - Recognition we need to improve usability
  - Need to migrate quickly NIH internal systems in older technologies and architecture
  - Re-engineering of business practices
  - People see what we are doing and want to increase scope and responsibilities
  - We scaled back expectations last May to match existing resources
  - Current RESOURCES have not matched need for the project for it to remain healthy but help may be on the way.
Salute and Good Bye to IMPAC I
Over Thirty Years of Service

IMPAC II/
Commons
Client-Server

Present

Operational Platform
Software Development
Business Process Re-engineering
NIH’s Link to e-Government
NIH’s Partnership with SBIR’s

Future

eRA
J2EE
eRA is an Evolving Project

IMPAC II/Commons
Client-Server

Present

eRA
J2EE

Future

Operational Platform
Software Development
Business Process Re-engineering
NIH’s Link to e-Government
NIH’s Partnership with SBIR’s
Migration to J2EE Needs to Be Quick

Present

IMPAC II/Commomns
Client-Server

Operational Platform
Software Development
Business Process Re-engineering
NIH’s Link to e-Government
NIH’s Partnership with SBIR’s

Future

eRA J2EE

Electronic Research Administration
National Institutes of Health
Increased Usability of IMPAC II

![Graph showing count of logons by month for FY 01, FY 02, and FY 03. The graph displays a significant increase in logons for FY 03 compared to FY 01 and FY 02.]
One measure of progress: Unscheduled Downtime

Bug in software provided by Compaq to run its machines
Overall Trends for eRA

- Users actively engaged
- Consistent feedback that things are better today compared to two years ago
eRA Budget
eRA Budget Evolution

**FY 1999**
- $15 million per year allocated for eRA

**FY 2000**
- Business case developed to increase funding to $34 million per year
- Initial 5-year financial plan established

**FY 2001**
- Developed initial cost model (Martha Pine)
- Began first baseline year of the 5-year plan in FY 01
- Funding received May 2001 and project funding built out on priorities based on a May-to-May cycle.
**eRA Planning and Tracking Cost Tool**

1. **User Community**

2. **Steering Committee**

3. **eRA Project Management**
   - Budget – $4,246,003
   - Contractor Support: $1,512,247
   - FTE’s: 539,756
   - ODC’s: 2,194,000

4. **Architecture**
   - Budget – $1,737,520
   - Contractor Support: $1,725,069
   - FTE’s: 12,451
   - ODC’s: 0

5. **Communications and Outreach**
   - Budget – $1,985,392
   - Contractor Support: $1,421,170
   - FTE’s: 389,222
   - ODC’s: 175,000

6. **User Support and Operations**
   - Budget – $2,494,762
   - Contractor Support: $1,434,003
   - FTE’s: 1,003,185
   - ODC’s: 57,574

7. **Quality Assurance & Configuration Control**
   - Budget – $6,549,456
   - Contractor Support: $5,379,631
   - FTE’s: 1,169,825
   - ODC’s: 0

8. **Technology Infrastructure**
   - Budget – $8,680,942
   - Contractor Support: $3,908,464
   - FTE’s: 291,758
   - ODC’s: 4,480,720

9. **Application Design, Estimation, Maintenance and Development**
   - **9a** Budget – $2,581,287
     - Contractor Support: $1,900,647
     - FTE’s: 680,640
     - ODC’s: 0
   - **9b** Budget – $432,220
     - Contractor Support: $313,232
     - FTE’s: 118,988
     - ODC’s: 0
   - **9c** Budget – $6,692,418

<table>
<thead>
<tr>
<th></th>
<th>Budget</th>
<th>Contracting Support</th>
<th>FTE’s</th>
<th>ODC’s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major Enhancements</td>
<td>$3,529,174</td>
<td>3,197,552</td>
<td>331,622</td>
<td>0</td>
</tr>
<tr>
<td>Minor Enhancements</td>
<td>$1,581,622</td>
<td>1,250,000</td>
<td>331,622</td>
<td>0</td>
</tr>
<tr>
<td>Maintenance</td>
<td>$1,581,622</td>
<td>1,250,000</td>
<td>331,622</td>
<td>0</td>
</tr>
</tbody>
</table>
## eRA FY02 Priorities

<table>
<thead>
<tr>
<th>Initiative</th>
<th>FY$ 2002 $ Required</th>
<th>FY 2002 $ Funded</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMPAC I Sunset</td>
<td>$492,898</td>
<td>$492,898</td>
</tr>
<tr>
<td>Migration to J2EE</td>
<td>$10,398,000</td>
<td>$4,105,646</td>
</tr>
<tr>
<td>Commons Rollout</td>
<td>$939,691</td>
<td>$939,691</td>
</tr>
<tr>
<td>e-SNAP</td>
<td>$1,266,315</td>
<td>$1,266,315</td>
</tr>
<tr>
<td>Enhancements / Maintenance</td>
<td>$2,901,375</td>
<td>$2,901,375</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>$15,998,279</strong></td>
<td><strong>$9,705,925</strong></td>
</tr>
</tbody>
</table>

Shortfall of ~ 6.3 million
Requesting ~ 4.9 million
Project Expenditure

- Equipment
- Software
- Building Alterations
- IMPAC I
- IMPAC II
- Dev/Maint
- J2EE Dev/Maint
- QVR

Dollars

3,500,000
3,000,000
2,500,000
2,000,000
1,500,000
1,000,000
500,000
0
Resource Issues

Not enough resources to keep project on schedule

- Project was down-scoped in May 2002
- Requirements were eliminated that now need to be added back for successful deployment
- Significant increase in resources necessary for NIH eRA Commons support
Old architecture

Oracle

- Grants Payment Module
- Grants Management
- Person Module
- ICSTORe
- Receipt and Referral
- SITS
- X-Train
- Type 4, 6, 7
- Population Tracking
- ECB
- QVR

~20% to 30% reduction is scope
J2EE Development Goals

- e-SNAP
- Financial Status Report

- CM Fast Track
- Internet Assisted Review
- E-Notification
- Program Portal

- GM Closeout – Maintenance
- IM Module – Maintenance

- Reduction in scope

- Reduction in scope

- i-Edison – delay full integration
Budget Recommendations

**FY03**

- Request a $10 million contingency fund allotment
  - $4.9 million in requested budget base increase
  - $1.5 million for Loan Repayment Program
  - $0.6K for QVR Support
  - $3.0 million in contingency fund money (10%)

**FY04**

- Request a $4.9 million increase to budget base
- Request a 10% contingency fund allotment ~ 5 million
Planning Ahead

A Happy New Year!
Setting Priorities for FY 03

- Data Quality
- eGrants
- Program Portfolio Management Interface
- IC Staff Roles and Management Interface
- Enhancing reports and query tools
- Partial Integration of Loan Repayment Applications
- i-Edison
- X-Train (Version 2)
- Pilots
  - Knowledge Management (review, program)
  - Wireless
NIH eRA Commons Modules*

- Computer Retrieval of Information on Scientific Projects (CRISP)
- Interagency Edison (iEdison)
- Application/Award Status
- X-Train

- Institutional Profile
- Professional Profile
- Institutional Registration and Accounts Administration
- FSRs and more
- e-SNAP—Progress Reports
- Internet Assisted Peer Review—IAR
- Competing Grant Applications

* 21 additional framework modules support these applications “behind the scenes”
Setting Priorities for FY 03

- Data Quality
- eGrants

**Program Portfolio Management Interface**

- Work in progress interface
  - Pull up Types 1, 2, 5 and track outstanding issues
  - Be able to annotate the summary statements and applications
  - Connect to e-Transactions-R2R with e-Notification

- IC Staff Roles and Management Shared Interface
- Enhancing reports and query tools
- Partial Integration of Loan Repayment Applications
- iEdison
- X-Train (Version 2)
- Pilots
  - Knowledge Management (review, program)
  - Wireless

(broad utility)
FY2003 Priorities broken down into 3 major areas:

- External Facing
- Internal Facing
- NIH eRA Common Components
Examples of External Facing Priorities

- CGAP
- Trainee
- eSNAP
- E-NAP
- External Website
- Public Reporting
- Closeout Submission
- FSR Data Stream
Examples of Internal Facing Priorities

- CGAP Processing
- RAE—Phase 1 & 2
- Finance & Budget
- Committee Management
- Trainee—Payback
- Program Portal
- Program Portfolio Management
- eRA Website Integration
- Records Management Phase 1
- Loan Repayment Program (LRP)
Common Components of FY2003 Priorities

- Data Architecture
  - Document services
  - XML storage and services
  - Functional Data marts
- Person Module
- Workflow
- Edit Checker
- E-notifications
Expectations from the Pilots:

- **E-Financial Status Report (eFSR-C)**
  - OFM will be able to accept FSRs using the same system.
  - FSR accepted by OFM will be generated and stored in grant folder FSR
- **Internet Assisted Peer Review (NIAID System & More - C)**
  - Pre-meeting submission of critiques & preliminary scores
  - Pre-meeting availability of critiques submitted by other Reviewers
  - SRA ability to designate applications as lower half
  - Automatic creation of pre-summary statement body in Word document for SRAs and GTAs
  - Will contain critiques sorted in order of assignment priority
  - SRA and GTA ability to designate a meeting, assign Reviewers, and define and manage Review phase dates (Submit, Read, Edit)
- **Committee Management Fast Track (NIH only)**
  - Meeting set-up and maintenance activities
  - Roster set-up and maintenance activities
  - Pilot ICs for the CM Fast Track are: NIMH, NIAID, CSR, NCI, NHLBI & NIGMS
- **Program Portal (NIH only - November)**
  - Architecture framework necessary to support all aspects of the portal.
  - Pre-Submission Tab and the General Resources Tab, which will provide information links to various resources in a central repository.
- **eSNAP - C**
eRA – NBRS Linkages

Legend
- CM Travel
- FSR
- GM
- SSO= Single Sign On

NIH User -> eRA SSO -> NIH SSO

- eRA SSO: Authentication
  - Authenticate user to NIH SSO

- Daily Transaction Set: Expenses for a meeting/committee
- Daily Transaction Set: Honorarium per meeting
- Daily Transaction Set: Check Register 1099 dataset (U09 grants)
- FSR Transaction Set: $ Carry Over | Submission date | etc.

- GM: Check Availability of Funds | Award Transactions
- GM: Award Confirmation

Travel Order
Meeting Roster ID (Identifying a person)
Travel Category

Grantee
Grantee
Grantee

GM
FSR
FSR

FOP
Research
Contracts

DCIS
Research
Contracts
## SBIRs Need 18 Million for Phase II

<table>
<thead>
<tr>
<th>Name</th>
<th>Grant Title</th>
<th>Research Orgs Product Used</th>
<th>Phase 1 Funding</th>
<th>Phase 2 Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERA Software Systems</td>
<td>Enhancements to GAMS to Include XML for the NIH Commons</td>
<td>5</td>
<td>$361,991</td>
<td>$1,416,110</td>
</tr>
<tr>
<td>PI: Dianne Bozler</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RAMS Company</td>
<td>Test ERA Software Package with Local Control of Profiles</td>
<td>1542</td>
<td>$295,478</td>
<td>$4,366,273</td>
</tr>
<tr>
<td>PI: William Kirby</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>InfoEd International</td>
<td>Electronic Submission/Response System via an NIH Portal</td>
<td>600</td>
<td>$422,389</td>
<td>$1,470,733</td>
</tr>
<tr>
<td>PI: Edward Johnson, Sr.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cayuse, Inc.</td>
<td>GrantSlam eRA: Scalable electronic grants administration</td>
<td>675</td>
<td>$409,584</td>
<td>$1,515,080</td>
</tr>
<tr>
<td>PI: Chris Harker</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Formatta Corp.</td>
<td>Next Generation eRA: Portable Internet Date Containers</td>
<td>25</td>
<td>$504,698</td>
<td>$3,785,541</td>
</tr>
<tr>
<td>PI: David Garver</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical Tools</td>
<td>Electronic Submission of NIH Grant Applications</td>
<td>8</td>
<td>$499,153</td>
<td>$5,417,697</td>
</tr>
<tr>
<td>PI: Brad Tanner</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Partners Not Limited to Funded SBIRs

Business-Government Strategic Partners Sought by NIH

The National Institutes of Health (NIH) is seeking to enter into strategic partnership arrangements with one or more organizations to undertake a major development effort for the electronic processing of grants at NIH.

The NIH eRA-SBIR promotional efforts for the electronic submission of grant applications will be expanded to include organizations that wish to develop applications and services without NIH financial support. NIH will work cooperatively with your organization and will offer certification for products/services that meet compatibility requirements (see data standards). In addition to public service and paid promotion, NIH is interested in establishing a partnership program with providers of approved eRA software solutions, and in forging agreements with the private sector to develop software, which will enable the NIH grantee community to participate in grants business processes electronically.

NIH seeks only those organizations with the extraordinary qualifications and experience required for such a vast undertaking. The National Institutes of Health plans extensive communications with potential business partners including a Public Briefing. The NIH invites all interested organizations to participate in the Public Briefing to be arranged on (insert date), at the (insert location), starting at 9:00 a.m. to 5:00 p.m. You may call Jerry Stuck on (301) 435-0690 for additional information.

- **Data standards**: NIH intends to follow an XML DTD format, which has been described for grant applications and notice of grant awards. NIH intends to certify software that is in compliance with these standards only. Potential partners are encouraged to review the data requirements for this initiative.
- **Individual Technical Conferences**: Qualified organizations, which meet or exceed the eligibility criteria set forth above, are encouraged to call Jerry Stuck at (301) 435-0690, to arrange individual technical conferences with the NIH. There are no prohibitions with respect to the subject areas to be discussed including the communication strategy. The NIH would make available its senior technical and business personnel to facilitate the discussions.
- **Written Comments**: Qualified and interested organizations are encouraged to provide written comments concerning all elements of this announcement. Please provide these comments by email to Jerry Stuck at j706cl@nih.gov.

Potential partners must submit clear and convincing documentation that demonstrates their capability to satisfy the NIH’s requirements. Potential partners responding to this announcement must submit the following:

- **Agencies, foundations, for profits, not for profits.**
What Is the Impact of the DHHS E-Grants?
Common Vision

**Federal Commons**

**FY 2000**
- Common face
- Single Entry Point
- Data streams (EDI – XML)
- NSF-NIH Web version equivalent of fast lane in the Federal Commons

**FY 2001**
- Develop a business and a research agenda
- Capitalize the project

**FY 2002**
- Launch and award SBIRs
- Hand off to e-Grants
Common Projects

Federal Commons
- Architecture defined
  - Component technology and XML data standards
- Registration/Organizational Profiles
- Funding Opportunities
  - NASA, NIH, NSF, and ONR
- Grant application pilots
  - Research, S&L
- Portal pilot

E-Grants
- E-Grants Business Case
  - IT Architecture based on Federal Commons
- Business Partner Network (BPN/CCR)
- Funding Opportunities
  - All agencies
  - OMB approval of synopsis
- Definition of core application data and cross-agency components
- Evaluating how to best utilize portal for E-Grants
Don't let the situation confuse you...
What This Means for NIH

- We will not have a Web application interface.
- We will push Web application and Adobe-type products to be done by the research organizations directly or the private sector for building products or becoming application service providers to research organizations.
Common Vision

FY 2001

Federal Commons

Agency Agency Agency NIH

E-Grants

• Common Face
• Single Point of Entry

Applicant 1 Applicant 2 Applicant 3 ..... Applicant N

E-Grants Trusted Broker

Agency 1 Agency 2 Agency 3 ..... Agency N

Unified “Trusted Broker” benefits Applicants and Agencies

• Electronic Storefront
• Trusted Broker
Key points for the NIH eRA strategy

SBIRs are an integral part of our strategy to:

- **Develop R2R2B2G software and procedures**
- **Fully penetrate the market to conduct e-grants within three years**
- **Build and enhance and customize components for research organizations**

**Bottom line we need the SBIR and other partners to be successful**
We will provide the opportunities for the private sector to:

- Use the XML data stream for research and to develop products
  - Core (424) and non core (rest of the 194)
- Use an Adobe-linked 398
  - Core and non core
- Market to others with the support of NIH and the Federal Government E-Grants.
  - XML or Adobe take the core plus features of the 194 specific to market for each agency and research organization
A Vision for Medical Discovery in the 21st Century

A Foundation for Achievement
A Roadmap to Meet New Challenges
An Investment in Future Health

Advisory Committee to the Director, NIH
December 5, 2002
Identified major roadblocks to solving key questions:

- Challenge of biological systems complexity
  - Beyond reach of current methods?
  - Overwhelming scale and complexity?
  - Computational and analytical limitations?

- Are we entering an era of “Big” Science?
  - Multi-disciplinary teams.
  - Viewing clinical research as a system.
The NIH Roadmap: Four themes emerged

- Revolutionary Methods of Research
- New Pathways to Discovery
- Multi-disciplinary Research Teams of the Future
- Re-engineering the Clinical Research Enterprise
eRA should be:

• A business processing and reporting tool?
• A business intelligence tool?
• A knowledge discovery tool?
• A clinical research tool?
Knowledge Growth

- Gene, Genome, Proteome databases are growing daily
- Literature is expanding with about:
  - 35,000 journal articles per month from 4,600 biomedical journals
- Grant Applications expanding
  - > 11,000 grants reviewed in spring alone
- PubMed alone consists of 11,000,000 citations
- Private foundations are spending ~ 20 billion to fund same investigators and projects as NIH
Looking Ahead

Your questions and discussions