Research Data Alliance – Current Status

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Rensselaer Polytechnic Institute
Digital Data driving modern research, education, practice
It’s Not Just Your Data, It’s Other People’s Data …

• To accelerate innovation, research community needs to build a culture of data sharing and reciprocity

• Needs span technology, infrastructure, community coordination / consensus, policy, practice
  – Common tools and coordinated infrastructure that facilitate data-sharing, exchange, and discoverability
  – Development, harmonization of standards that enable open access data sharing
  – Creation / Adoption of Data sharing policy and best practice, etc.

“4 threats to establishing a Global Data Infrastructure” (Alan Blatecky, NSF)

1. Not understanding the critical importance of sharing data for next century science and education

2. Not understanding the urgency of addressing and creating a global data infrastructure now

3. Relying on additional workshops, conferences, committees and so forth to study and provide more recommendations

4. Waiting for standards to be approved that will enable data sharing, interoperability, and support the entire data life cycle
Community coordination needed to accelerate data-driven discovery and innovation

• “Just do it” -- Focused efforts help communities drive tangible progress

![Image of PDB Protein Data Bank]

Creation / adoption of data sharing policies have accelerated research innovation

![Image ofMPI Forum]

Development and adoption of parallel communication protocols through the MPI Forum drove a generation of advances

![Image of IETF]

Development of a publicly available shared data collection enabling new results for Alzheimer’s

Now 25 years old, the Internet Engineering Task Force’s mission “to make the Internet work better” has resulted in key specifications of Internet standards that support innovation

Transfer-Messenger RNA image (PDB Molecule of the Month for January 2013) courtesy of David Goodsell and the RCSB PDB

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Research Data Alliance: New Organization to Accelerate Global Data Sharing and Exchange

• The Research Data Alliance (RDA) is a new organization forming to facilitate specific, short-term efforts that accelerate the sharing and exchange of research data

• Working groups will serve as accelerants to data sharing practice and infrastructure. Work products / deliverables to include
  – Adopted standards
  – Deployed infrastructure
  – Adopted policy
  – Implemented best practice, etc.
Focused Efforts, Tangible Progress

RDA Working Group Expectations

• **Contribute to coordinated global infrastructures** that drive data-driven innovation

• **Can be accomplished in 12-18 months** of work and eliminate a roadblock for a substantial community

• **Have substantive applicability** to cohorts within the data community, but may not apply to everyone

• **Create actionable deliverables that are adopted** by Working Group members and others

• **Enable working scientists and researchers to move forward today** while complementary long-term and far-reaching solutions are being appropriately pursued in other venues
RDA timeline: 2011 - 2013

Pre-2011 and 2011: Broad spectrum of national initiatives, international projects, “bottom up” community efforts world-wide

2011 - 2012

2011, 2012: informal International meetings

Spring, 2012: Concept Paper – Data Web Forum (US)

October 2012: Global Data Meeting (RDA Planning Meeting) in Washington DC

RDA Steering Group established in August, 2012 (US, EU, AU representatives)

Summer 2012 – Winter 2013: BRDI, EUDAT Conference, e-IRG Meeting, CNI Meeting, ESIP Meeting, CENDI, etc. all having RDA sessions

2012 - 2013

October, 2012: First RDA Council members announced at EUDAT: John Wood (EU), Ross Wilkinson (AU), Fran Berman (US)

RDA Launch and first Plenary scheduled for March 18-20, 2013 Gothenburg, Sweden

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RDA Development Status

Pre-Global Data Meeting
- Initial discussions: Vision, Purpose, WG, Governance, Membership, etc.
- Planning for October Meeting

Global Data Meeting
- Community information and input
- Feedback on initial discussion issues
- Germination of vanguard Working Groups

Pre-launch
- Continuing conceptualization of operations and bylaws, etc. with expanding RDA community
- Population of Council, Sec., Working Groups

March 2013 Plenary Launch
- High-level plenary speakers
- Discussion of by-laws, charter, etc.
- Reports on initial WGs and approval of new WGs, etc.

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Community Momentum

National Science Foundation
Office of International Science & Engineering (OISE)

All Images
Press Release 12-216
NSF-Supported Research Data Alliance/U.S. Collaborates with International Partners to Accelerate Data Sharing

Research Data Alliance kicks off new initiatives
Posted on 16-4-2012 by DPN Staff
Fran Berman and the Research Data Alliance (formally the Data Web Forum) discuss an upcoming working group meeting in DC with representatives from around the world. Steven Mesfin and Fran Berman will be discussing how DPN is

EOS
Eos, Transactions American Geophysical Union

Initiative to establish Research Data Alliance moves forward
Published online: 7 SEP 2012
Vol. 93, Issue 37, page 354, September 2012

DuraCloud
@DuraCloud

Research Data Alliance aims to jumpstart global data exchange by enabling sharing of what works–code, tools++ rd-alliance.org #cni12f

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Initializing RDA

**Goal:** Evolve RDA as an open community organization with a focus on real impact and inclusion

**RDA Guiding Principles:** RDA should

- Be open and transparent to the community
- Be community-driven, consensus-focused, voluntary, not-for-profit
- Include a balanced representation of stakeholders
- Facilitate harmonization across standards, policies, technologies, tools, infrastructure
Initializing RDA: Organizers

• **Initial Council:**
  – John Wood, EU
  – Ross Wilkinson, AU
  – Fran Berman, US

• **Steering Group**
  – Fran Berman, US
  – Juan Bicarregui, UK
  – Leif Laaksonen, EU
  – Beth Plale, US
  – Andrew Treloar, AU
  – Ross Wilkinson, AU
  – Peter Wittenburg, EU
  – John Wood, EU

• **Secretariat:**
  – Herman Stehouwers, EU
  – Stefanie Kethers, AU
  – Mark Parsons, US
Initializing RDA: Organizational Framework (Work in Progress …)

RDA Strategy and Leadership: **Council**
Responsible for overarching mission, vision, sustainability of RDA

Technical Leadership: **Technical Advisory Group (TAG)**
Responsible for Technical Roadmap

Administrative Leadership: **Secretariat**
Responsible for Administration and Operations

Organizational Partners: **Organisational Advisory Group (OAG)**
Responsible for Process Reference Document

Community Impact: **Working Groups**
Responsible for impactful, outcome-oriented efforts

Government Group
Appropriate International R&D Agency Support

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Initial Sponsors

- **US:**
  - Research Data Alliance / U.S. – funded by NSF, in-kind support from NIST

- **AU:**
  - Australian National Data Service – funded by the Australian Government

- **EU:**
  - iCORDI – funded by the European Commission

Organizational Partners

- **Discussions in Progress**
- Organizational partners expected to include
  - Public sector R&D agencies
  - Private sector companies
  - Community organizations
- Working through “win-win” partnership models focused on financial or in-kind support for RDA efforts
First Gathering: The October 2012 Global Data Meeting

- Initial meeting combining the NSF DataNet / Interop community (US), the DAITF community (EU), and others to evolve the Research Data Alliance structure and vision

- 10+ discussion groups formed to work through potential foci for RDA Working Groups

- Global Data Meeting participants formed a basis for RDA’s first members and forum discussions
# First Interest Groups

<table>
<thead>
<tr>
<th>Title</th>
<th>Chairs</th>
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<tbody>
<tr>
<td>Harmonization and Use of PID Information Types</td>
<td>Tobias Weigel, Tim DiLauro</td>
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<td>UPC Code for Data</td>
<td>Jim Myers, Margret Hedstrom</td>
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<td>Data Type Registries</td>
<td>Larry Lannom, Daan Broeder</td>
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<td>Metadata</td>
<td>Jane Greenberg, Rebecca Koskela</td>
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<td>Pub/Data Citation/Linking</td>
<td>Yannis Ioannidis</td>
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<td>Data Foundation and Terminology</td>
<td>Gerhard Budin, Peter Wittenburg, Gary Berg-Cross</td>
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<td>Practical Policy</td>
<td>Reagan Moore, Rainer Stotzka</td>
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<td>Legal Interoperability</td>
<td>Paul F. Uhlir, Enrique Alonso Garcia</td>
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<td>Defining Urban Data Exchange for Science</td>
<td>Charlie Catlett, Walter Stewart, Theresa Pardo</td>
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<td>The Engagement Group</td>
<td>Inna Kouper, Andrew Maffei, Marcio Faerman</td>
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<td>Marine Data Harmonization</td>
<td>Helen Glaves</td>
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<tr>
<td>Repository Audit and Certification</td>
<td>Ingrid Dillo</td>
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Creating Working Group Efforts

“Bottom-up” increase of interest → development of a Interest Group Case Statement (some groups forming via forum.rd-alliance.org)

Community feedback (via forum.rd-alliance.org) and continued development of Case Statement; submission to Council

RDA Working Group: 12-18 month out-come oriented effort culminating in adoption and implementation of its “Action Plan”

Post-completion continuation of action of Working Group members and broader community, continued promotion by RDA

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Case Statements: Articulation of Proposed Effort and Community Impact

1. **WG Charter:** What will be done? What are the deliverables?

2. **Value Proposition:** Who will benefit and how?

3. **Engagement with Existing Work in the Area:** What else is going on? What can we leverage?

4. **Action Plan:** Who will adopt / implement within the Working Group? What are the plans for adoption / implementation of the deliverables more broadly?

4. **Work Plan:** How will the Working Group operate?

5. **Initial Membership:** Who will be involved? Who will lead?
Evaluating Case Statements for Alignment with RDA

• **FOCUS:**
  - Are the deliverables/outcomes and the WG Action Plan achievable? Do they produce tangible results?
  - Are there measurable outcomes?

• **IMPACT and ENGAGEMENT:**
  - Are there adopters for the deliverables?
  - Will the outcome(s) of the Working Group foster data sharing and/or exchange?

• **TIMEFRAME:**
  - Can the proposed work be accomplished in 12-18 months?

• **SCOPE / FIT:**
  - Is the scope too large for effective progress, too small for an RDA effort, or not appropriate for the RDA?
  - Overall, is this a worthwhile effort for the RDA to take on?
  - Is this an effort that adds value over and above what is currently being done within the community?
Initializing RDA: Web and Communications

- Second iteration of rd-alliance.org website
  - Continuing to evolve / develop community portal that includes information, support for forums and feedback, impacts and news, etc.

- Increasing need for professional-level communications and outreach
  - Within RDA community
  - To larger stakeholder community
Towards “T=0” in 2013: High-profile, high impact RDA Plenary and Launch

• **March 18 -20, 2013**
  - Official launch event and first Plenary for RDA: Chalmers University, Gothenburg Sweden

• **Agenda includes**
  - High-level international speakers (U.S.: Farnam Jahanian and Alan Blatecky, Chris Greer (NIST), others awaiting confirmation).
  - Birds of a Feather Sessions for RDA Interest Groups
  - Data Organization and International Data Panels
  - RDA all-hands meetings, etc.
Accelerating RDA Momentum

• Growing the RDA Community
  – **Increase membership** through the rd-alliance.org website and forums
  – **Create a pipeline of impact-oriented deliverables** through the development and cultivation of RDA Working Groups
  – **Promote the Launch and Plenary** as a gathering place for the community

• Growing the RDA Organization
  – **Develop a functional and effective organizational structure** (v.1 by the Plenary)
  – **Reach out to founding Organizational Partners** and create a win-win partnership model

• Growing RDA Leadership
  – **Populate the initial Council, Secretariat, Technical Advisory Group**
  – **Work with initial active community members** to take on greater roles and responsibilities

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Thank You

• **Information:**
  rd-alliance.org

• **Questions, comments:**
  enquiries@rd-alliance.org

• **Registration and Forum:**
  forum.rd-alliance.org