Resource Plan & Schedule

PDS 2010 System Review
March 22-24, 2010

Dan Crichton

Agenda

- Resources
- Schedule

Resources for PDS 2010

- Resource allocation based on
  - Overguide specifically for PDS 2010
  - Inguide from EN and DNs repurposed for PDS 2010
  - Re-prioritization of key staff
- Staffing support focus on PDS4 data standards initially, then shift to system development effort
  - PDS Discipline Nodes have been accommodating this structure, but there participation is directed by their node managers
- Actual data migration will be funded out of PDS operations budgets
- Hardware requirements minimal for PDS 2010; nodes can fund out of normal replenishment budget

Budget

- Each PDS node operates within a guideline budget that covers node development and operations providing on-going support for PDS
  - Some development, particularly at Engineering, can be done within guidelines through re-direction
  - Again, each budget is under cognizant of their respective DN

- In 2010, 2011 and 2012, the PDS requested additional overguide for PDS nodes to cover PDS 2010 which has been granted (approx .5 FTE / node)
  - This is to get the capability in place and then allow for future development and extension
  - On-going development and maintenance of PDS will continue beyond 2012 as part of the normal PDS program
  - Confirmation was received in December 2009

EN Budget Support

- Funding for PDS 2010 development at EN, budget given directly to the area leads
  - Steve Hughes (model, standards)
  - Sean Hardman (system development)
  - Emily Law (I&T, transition)

PDS 2010 Project Commitment

- Deliver an initial PDS4 Data Standard by October 2010 to begin coordinating PDS4 product definitions and systems development
- Deliver a prototype infrastructure build by October 2010 to test ingestion of PDS4 sample data products
- Deliver an initial operational capability for PDS4 by October 2011 to support ingestion and distribution of PDS4 data products
- Deliver additional tools and a framework to support PDS4 transformation and science services/distribution capabilities by June 2012

Build Plan

Phase	Purpose	Release	Date
I Prototype Build 1 Ingestion	• Release a prototype Ingest Subsystem • Baseline PDS4 model, standards reference • Enable PDS3 to PDS4 catalog migration • Support testing of Node interfaces • Support PDS4 product prototypes	• PDS4 info model, standards reference, data dictionary, schemas baseline • PDS 2010 Ingestion subsystem including Harvest, Registry (Inventory, Document, Dictionary, Service), Report and Security services • Initial data provider tool suite • First set of process, documentation and tutorial	October 2010
II Operational Build 2 Distribution	• Initial operational PDS 2010 system and PDS4 Standards • Allow acceptance of PDS4 data into operational archive • Enable data migration from PDS3 to PDS4 • Allow user to search and access both PDS3 and PDS4 data	• E2E PDS 2010 system, Distribution subsystem including Search and Monitor services, revised web site, general portal applications • Complete tool suite • 1st release of PDS4 standards reference, data dictionary • Enhanced process, documentation and tutorial	October 2011
III Operational Build 3 User Capabilities	• Incremental release of operational PDS 2010 system to enhance user capabilities • Support data transformation • Support science services	• Integration of DN applications and science services • Order and Subscription services	June 2012

Data Standards Development

- DDWG Support thru September 2009
  - Anne Raugh/SBN (.3)
  - Mitch Gordon/Rings (.3)
  - Lyle Huber/Atmos (.3)
  - Ed Guinness/Geosciences (.3)
  - Steve Joy/Joe Mafi/PPI (.3)
  - Boris Semenov/NAIF (.1)
  - Dick Simpson/Radio Science (.2)
  - Elizabeth Rye (.8) (.4 EN; .4 IMG)
  - Steve Hughes/EN (.5)
  - Ron Joyner/EN (.5)
- EN: 1.4 FTE; DN: 2.2 FTE

* .2 support/node for burst activities, etc

Data Standards Breakdown for getting to Build 1

- Data Model (25% effort) thru Sept 2010
  - Common Model (DDWG members)
  - Discipline Model (20% EN, 80% DN); effort needs to ramp up in conjunction with DD
- Data Dictionary (25% effort) thru Sept 2010
  - (40% EN, 60% DN)
  - Continuing to ramp up
- XML Product Definition and Best Practices (10% effort) thru Sept 2010
  - (30% EN, 70% DN)
  - This needs be a larger focus in Jan/Feb
- Tutorial Material (15% effort) Jan 2010 – Aug 2010
  - (70%, 30% EN)
  - Initial discussions at the January F2F
- Standards Reference (25% effort) Thru Sept 2010
  - (60% EN, 40% DN)
  - Ramp up will occur in spring timeframe

Data Standards in FY11/ FY12

- .2 FTE from the nodes to support data standards
  - Discipline node models, standards releases
  - Other support will go to development and integration on the software-side
- EN will continue to provide leadership and model support, but transition in FY12 to maintenance
  - 1.4 FTE (FY11)
  - .4 FTE (FY12 development); .5 FTE maintenance (PDS4); .1 FTE PDS3 maintenance
- Standards maintenance continues as part of the PDS POP budget

System Development

- System Design and Development Support (FY10)
  - Sean Hardman/Engineering (.5)
  - Todd King/PPI (.05)
  - Tom Stein/Geosciences (.05)
  - Alice Stanboli/Sciences (.05)
  - EN Development Support (2.5)

- FY11/FY12 Planned Support*
  - 3.0 FTE (Engineering)
  - 0.3 FTE/node for Development
  - 1.0 FTE (ARC) GUI/tool development

*Note: A tech session will be proposed for fall 2010 to support this transition

Systems Development Pathway to Build 1 (ingestion)

- Hardware - 100% complete
- Systems Architecture and Design (.4 Hardman)
- Ingestion Subsystem
  - Harvest (.25 S. Kelly)
  - Inventory/Document/Dictionary Registry (1.0 Ramirez)
  - Report (.25 H. Lee)
  - Security (.5 H. Lee)
- Initial Validation Tool (.25 M. Cayanan)
- Documentation and Tutorials (.3 Ron Joyner, .1 Hardman) – these are coordinated with DDWG

- NOTE: Prototype products will be delivered from DDWG; Remaining FTE support working on later phases of development

Operations*

- FY10 Planned I&T, Deployment Support
  - 0.4 FTE (Engineering) - develop Build I test plan; support Build I I&T, deploy Build I H/W, S/W, support CM & build management
  - 0.1 FTE (one or 2 selected node) - support Build I I&T and deployment at the node(s)
- FY11 Planned I&T, Deployment & Prototype Support
  - 0.75 FTE (Engineering) - support Build I prototype activities (catalog migration, data prototype validation etc); develop Build II test plan, support Build II I&T, deploy Build II H/W, S/W, support CM & build management
  - 0.1 FTE (all nodes) - support Build II I&T and deployment at the nodes
- FY12 Planned I&T, Deployment & Operations Support
  - .75 FTE (Engineering) - support Build II operations; develop Build III test plan & Mirror Site, support Build III I&T, deploy Build III H/W, S/W, support CM & build management
  - 0.1 FTE (all nodes) - support Build III test, deployment and integration at the node(s); development of Build III science services test plan

** EN Operations, will migrate personnel to support PDS 2010*

On-going Maintenance

- .5 PDS3 Development Maintenance (EN)
- .1 PDS3 Standards Support and other PDS3 items (EN)
  - Email used, where possible, to close out SCRs
  - Telecons for larger issues

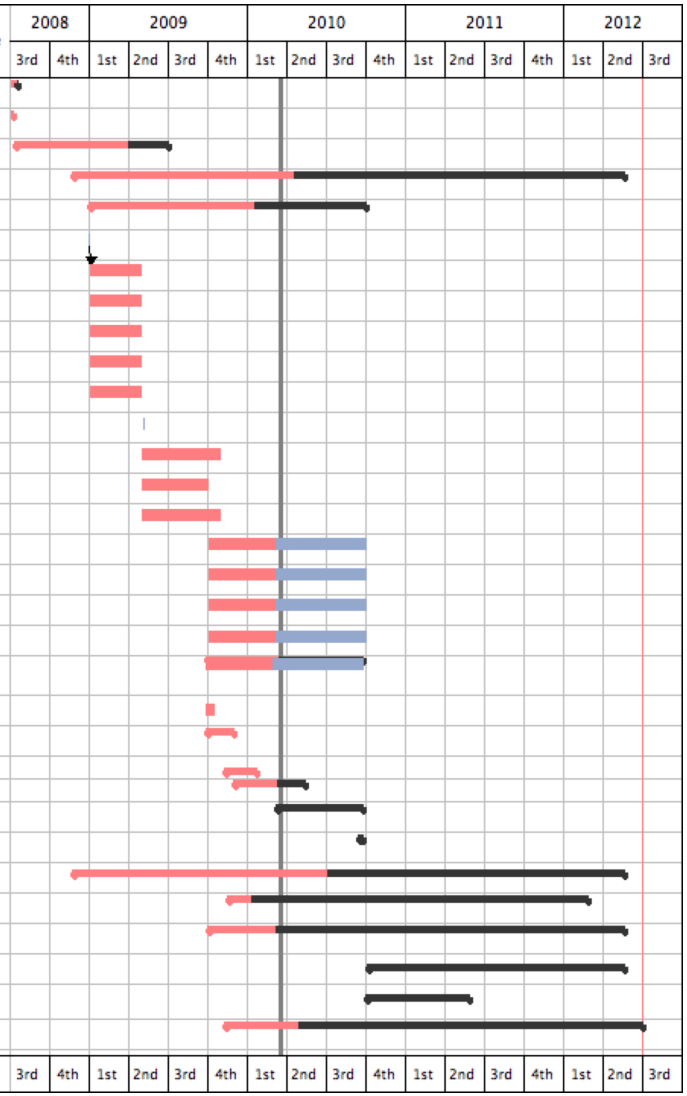
Project Schedule

- Study Phase (August 2007 - March 2008)
- Project Definition (January 2008 - July 2008)
- High Level Architecture (July 2008 – January 2009)
  - Include trade studies and transition planning
- Development (2009 –2012)
  - Build 2010-1 (October 2009 – September 2010)
  - Build 2010-2 (July 2010 – September 2011)
  - Build 2010-3 (April 2011 – May 2012)
- Deployment* (2010 –2012)
  - Build 2010-1 (October 2010)
  - Build 2010-2 (October 2011)
  - Build 2010-3 (June 2012)

* Incremental releases occur between deployments….

PDS4 Data Standards Schedule

Activity Name	Duration (Work Days)	Start Date	Finish Date
Concept/Study Phase...	240.00	8/20/07	7/18/08
Project Planning...	133.00	1/7/08	7/9/08
Architecture/System Engineering...	254.00	7/10/08	6/30/09
Projects	911.00	11/21/08	5/18/12
P1. Data Standards Project	455.00	1/2/09	9/30/10
PDS 2010 Data Standards Implementation Plan	1.00	1/2/09	1/2/09
General Data Model (Draft)	84.00	1/5/09	4/30/09
Product Data Model (Draft)	84.00	1/5/09	4/30/09
Data Dictionary Model (Draft)	84.00	1/5/09	4/30/09
Grammar Options Outlined	84.00	1/5/09	4/30/09
PDS Standards Reference (Outline)	84.00	1/5/09	4/30/09
Review and Comment by Tech Group (Tech	1.00	5/4/09	5/4/09
Data Dictionary Model (Final)	131.00	5/1/09	10/30/09
Grammar Decision	109.00	5/1/09	9/30/09
PDS Standards Reference (Draft)	131.00	5/1/09	10/30/09
General Data Model (Final)	259.00	10/5/09	9/30/10
Product Data Model (Final)	259.00	10/5/09	9/30/10
PDS Standards Reference (Final)	259.00	10/5/09	9/30/10
PDS Data Dictionary (Content)	259.00	10/5/09	9/30/10
PDS4 Data Standards Reviews	259.12 260.00	9/28/09 9/28/09	9/24/10 9/24/10
Configure PDS4 Data Standards Wiki	14.12	9/28/09	10/16/09
DDWG Review...	45.12	9/28/09	11/30/09
PDS Internal Review/Excercises...	53.12	11/9/09	1/21/10
Community / IPDA Review...	119.12	11/30/09	5/14/10
Prepare Final PDS4 Data Standards Documents...	144.12	3/8/10	9/24/10
Readiness Review...	9.12	9/13/10	9/24/10
P2. Distributed Infrastructure Project...	911.00	11/21/08	5/18/12
P3. Tools Project...	595.00	11/16/09	2/24/12
P4. Distributed Catalog System Project...	688.00	9/30/09	5/18/12
P5. Portals, Search and Distribution Project...	425.00	10/4/10	5/18/12
P6. Data Movement and Delivery Project...	171.00	10/1/10	5/27/11
Builds...	690.00	11/9/09	6/29/12



PDS 2010 Software System Schedule

Activity Name	Duration (Work Days)	Start Date	Finish Date
Concept/Study Phase...	240.00	8/20/07	7/18/08
Project Planning...	133.00	1/7/08	7/9/08
Architecture/System Engineering...	254.00	7/10/08	6/30/09
Projects	911.00	11/21/08	5/18/12
P1. Data Standards Project...	455.00	1/2/09	9/30/10
P2. Distributed Infrastructure Project	911.00	11/21/08	5/18/12
Implementation Plan	20.00	1/5/09	1/30/09
Technologies and Standards Identification	140.00	11/21/08	6/4/09
Phase I (Security, Report, Registries)...	270.00	2/9/09	2/19/10
Phase II (Registries, Dictionary, Service)...	215.00	10/26/09	8/20/10
Phase III (Search)...	155.00	6/7/10	1/7/11
Phase IV (Storage)...	165.00	10/3/11	5/18/12
P3. Tools Project	595.00	11/16/09	2/24/12
Requirements	100.00	11/16/09	4/2/10
Validation Tool	120.00	4/5/10	9/17/10
Design/Generation Tool	170.00	7/5/10	2/25/11
Transformation Tool	230.00	3/1/11	1/16/12
Visualization Tool	170.00	7/4/11	2/24/12
P4. Distributed Catalog System Project	688.00	9/30/09	5/18/12
Implementation Plan	15.00	9/30/09	10/20/09
Requirements	53.00	10/21/09	1/1/10
Phase I (Inventory, Document, Harvest)...	325.00	1/4/10	4/1/11
Phase II (Ingest)...	120.00	12/5/11	5/18/12
P5. Portals, Search and Distribution Project...	425.00	10/4/10	5/18/12
P6. Data Movement and Delivery Project...	171.00	10/1/10	5/27/11
Builds...	690.00	11/9/09	6/29/12