

**CDF-II Memorandum of Understanding
among the
Fermi National Accelerator Laboratory,
the CDF-II Collaboration
and the University of Glasgow**

I. Personnel and Coordination of Responsibilities

A. The following members of the University of Glasgow are presently participants in the collaboration. This level of commitment is expected to remain approximately constant for three year

| Name | Title | Loc | 2004/05 | 2005/06 | 2006/07 | 2007/08 | |
|------------------|-------|-----|---------|---------|---------|---------|---------------|
| R.St.Denis† | P | F/G | 80%* | 80%* | 50%* | 50%* | LHC, Teach |
| P.J.Bussey† | P | F/G | 80% | 80% | 80% | 80% | ZEUS, Teach |
| S.D'Auria | P | F | 100% | 50% | 10% | 10% | LHC (4/05 on) |
| A.S.Thompson | P | G | 50% | 50% | 50% | 50% | LHC |
| A.Robson | P | G | 0% | 50% | 100% | 100% | LHC |
| | | | | | | | |
| P.Athalon | S | F | 100% | 100% | 100% | 100% | |
| T.Davies | S | F | 100% | 100% | 100% | 100% | |
| T.Unverhau‡ | S | G | 100% | 0 | 0 | 0 | |
| L.Nicolas | S | F | 100% | 25% | 0 | 0 | |
| B.Ward[2] | S | F | 100% | 0 | 0 | 0 | |
| | | | | | | | |
| M.Burgon-Lyon[1] | CP | G | 100% | 100% | 100% | 100% | |
| P.Millar[1] | CP | G | 70% | 70% | 70% | 70% | LHC |
| S.Hanlon[1] | CP | G | 30% | 30% | 30% | 30% | LHC |

*R. St. Denis is the University of Glasgow CDF-II coordinator. Other 10% duty is LHC.

†R.St.Denis and P.J.Bussey each spend 60% of their time at FNAL

‡T.Unverhau will Graduate By Jan 2005

[1] Full time Computing professionals working on Metadata for CDF, ATLAS and in general. Not CDF Authors, contribute only service work according to attached deliverables and milestones reportable to GridPP. Level 1 delevrables monitored by the UK Science Ministry.

[2] On leave

- A. The coordinator for the University of Glasgow is R. St. Denis and the representative on the CDF-II Executive Board is R. St. Denis. The alternative members for the Executive Board are P.J.Bussey, S.D'Auria and A.S.Thompson.

II. Responsibilities of Glasgow University

A. Project: GridPP Metadata Working Group

1. Project coordinator across CDF,CMS,ATLAS,LHCB,D0, BaBar,CMS:R. St. Denis

B. Project:Accelerator Divison Work:

1. Computations of optimization for Lithium lens for antiproton production: Bussey

C. Offline Activities:

1. Maintenance of Pythia interface (A.S.Thompson)
2. Maintenance of Ariadne interface (A.S.Thompson)
3. Mintenance of Error checking code for SIXD, ISLD (A.S.Thompson)
4. Header Class maintenance for SIXD, ISLD (A.S.Thompson)
5. Maintenances of validation of the data structures for ISLD, SIXD (A.S.Thompson)

D. Offline Representative

1. A.S.Thompson

E. Deliverables

1. Metadata handling and query language for SAMGrid; integration of software with LHC
2. Feedback and debugging of CDFGrid for use in analysis: MC, stripping, ntuples.

F. Operational Activities

1. Post-docs and graduate students will participate as Aces or SOS.
2. All will be first line testers of the CDFGrid software as applied to analysis.
3. Metadata Working Group (R. St. Denis)
4. Metadata software for SAM (Burgon-Lyon,Millar,Hanlon)
5. Support of Lithium lens computation program and fielding of computation requests (P.J. Bussey)

G. Supervision

1. Non-SAMGrid Offline activities are coordinated by A.S.Thompson.

2. Grid_activities relevant to CDF are coordinated by R. St.Denis.
3. Accelerator activities are coordinated by P.J.Bussey.

H. Schedule

1. See addendum for deliverables to GridPP (Project Month 1 is September 2004)

Addendum: Deliverables for GridPP Metadata Posts

The following outlines the deliverables for the GridPP Metadata posts. These are focused upon: the ATLAS experiment; the CDF experiment; generic metadata. Level I deliverables are displayed with a whole number, n, and their associated Level II and III deliverables are shown underneath as n.1, n.1.1 etc.

The deliverables are shown in their intended order, with the post responsible indicated. PM means project month, starting with month 1 on September 1, 2004.

| No: | PM | Post | Deliverable |
|-------|----|---------|--|
| 1 | 3 | All | Review and assess all known documents referring to HEP metadata use cases |
| 1.1 | 2 | ATLAS | Review and assess ATLAS documentation referring to HEP metadata use cases |
| 1.2 | 2 | CDF | Review and assess of CDF documentation referring to HEP metadata use cases |
| 1.3 | 3 | Generic | Review and assess documentation referring to HEP metadata use cases |
| 2 | 6 | All | Documenting schema for metadata |
| 2.1 | 5 | ATLAS | Document AMI schema for metadata |
| 2.2 | 5 | CDF | Document SAM schema for metadata |
| 2.2.1 | 4 | CDF | Document existing Dimension Editor |
| 2.3 | 6 | Generic | Summary document of differences in schema for metadata between experiments |
| 3 | 8 | All | Definition of Metadata service (including distinction by experiment) |
| 3.1 | 7 | ATLAS | Definition of Metadata service in AMI |
| 3.2 | 7 | CDF | Definition of Metadata service in SAM |
| 3.3 | 7 | Generic | Architecture and Planning Report |
| 4 | 33 | All | Implementation of appropriate metadata |
| 4.1 | 9 | All | Initial minor release |
| 4.1.1 | 4 | ATLAS | AMI Admin Tool |
| 4.1.2 | 5 | All | Review of EGEE Metadata Catalog |
| 4.1.3 | 6 | Generic | Design of Grid Services |
| 4.1.4 | 6 | CDF | Develop Dimension Editor |
| 4.1.5 | 8 | All | Develop prototype Metadata Catalog |
| 4.1.6 | 9 | All | Software and associated documentation |
| 4.2 | 21 | All | 1 st Major release |
| 4.2.1 | 20 | ATLAS | User Metadata writing capability code and user documentation in commissioning run |
| 4.2.2 | 24 | All | Prototype distributed metadata service with GANGA interface, delivery middleware and web services interface. |
| 4.2.3 | 18 | CDF | Optomised Dimension Editor |
| 4.2.4 | 18 | Generic | Review Architecture and Planning Report |
| 4.2.5 | 20 | Generic | Design and Refactoring of Grid Services |
| 4.2.6 | 21 | All | Software and associated documentation |
| 4.3 | 33 | All | 2 nd Major release |
| 4.3.1 | 33 | ATLAS | Production release |
| 4.2.2 | 30 | CDF | Fully functional Dimension Editor |
| 4.3.3 | 30 | Generic | Review Architecture and Planning Report |
| 4.3.4 | 32 | Generic | Design and Refactoring of Grid Services |
| 4.3.5 | 33 | All | Software and associated documentation |
| 5 | 11 | All | Document common monitoring requirements |
| 5.1 | 10 | ATLAS | Document monitoring requirements of AMI |
| 5.2 | 10 | CDF | Document monitoring requirements of SAM |
| 5.3 | 10 | Generic | Document common monitoring requirements (using AMI and SAM documents) |
| 6 | 12 | All | Assisting wider adoption of Metadata service (to be reviewed annually) |

| | | | |
|--------|----|---------|---|
| 6.1 | o | All | Maintain collaborative resources (to be reviewed quarterly) |
| 6.1.1 | o | Generic | Wiki |
| 6.1.2 | o | ATLAS | GridPP Metadata web pages |
| 6.1.3 | o | Generic | CVS repository |
| 6.1.4 | o | Generic | Defect tracking |
| 6.1.5 | o | CDF | Other resources for collaborative work |
| 6.2 | 12 | All | External Presentations |
| 6.2.1 | 12 | All | Submit documentation to the GGF-PNGA working group in GridForge |
| 6.3 | 12 | All | External Project Integration Report (Confidential) |
| 7 | 16 | All | Review Metadata service definition |
| 7.1 | 14 | ATLAS | Review AMI implementation |
| 7.2 | 14 | CDF | Review SAM implementation |
| 7.3 | 15 | Generic | Identify generic components |
| 8 | 19 | All | Throughput testing of database access via Metadata |
| 8.1 | 18 | ATLAS | AMI throughput testing of database access via Metadata using AMI |
| 8.1.1 | 18 | ATLAS | Evaluation of AMI Metadata service from DC3 |
| 8.2 | 18 | CDF | SAM throughput testing of database access via Metadata using SAM |
| 8.3 | 18 | Generic | Common testing interface |
| 9 | 28 | All | Contribution to EGEE Development |
| 9.1 | 4 | ATLAS | Initial EGEE Phase 1 release |
| 9.2 | 16 | CDF | Final EGEE Phase 1 release |
| 9.3 | 28 | Generic | Initial EGEE Phase 2 release |
| 10 | 30 | CDF | Produce documentation on distributed databases |
| 10.1 | 28 | ATLAS | Review POOL and RLS for DD (ATLAS) |
| 10.2 | 28 | CDF | Review SAM and RLS functionality |
| 11 | 24 | All | Produce documentation on user access optimisation of data access via metadata |
| 11.1 | 23 | ATLAS | Produce a document on user access optimisation of data access via metadata in AMI |
| 11.2 | 23 | CDF | Produce a document on user access optimisation of data access via metadata in SAM |
| 11.3 | 23 | Generic | Produce generic document on user access optimisation of data access via metadata |
| 12 | 36 | All | Final evaluation of metadata components |
| 12.1 | 35 | ATLAS | Final evaluation of ATLAS metadata components |
| 12.1.1 | 27 | ATLAS | Evaluation of ATLAS metadata services in commissioning run |
| 12.2 | 35 | CDF | Final evaluation of CDF metadata components |
| 12.3 | 35 | Generic | Final evaluation of metadata components (summary) |

Note:

The following Generic Metadata deliverables have been moved to Data Management :

PM10 & PM21 : Tier 1 and Tier 2 Support Report

**CDF-II Memorandum of Understanding
among the
Fermi National Accelerator Laboratory,
the CDF-II Collaboration
and the University of Glasgow**

Fermilab Directorate

date

CDF-II Detector Operations Department Head

date

CDF-II Detector Operations Department Head

date

CDF-II Offline Operations Organization Head

date

CDF-II Offline Operations Organization Head

date

CDF-II Spokesperson

date

CDF-II Spokesperson

date

Coordinator for the University of Glasgow

date