



# DataGrid Quality Assurance

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# Outline

- ◆ Quality objectives
- ◆ Quality deliverables & related deliverables
- ◆ Main Process description
  - Project monitoring and reporting
  - Document management and deliverables review procedure
  - Software release procedure
  - Configuration management, code repository, autobuild and bug tracking management
  - Standards and tools
- ◆ Plan for the next year
- ◆ Summary
- ◆ Questions



## Quality objectives (1/2)

- ◆ Merge Scientists from research environment with conventional industrial Quality Assurance activity.
- ◆ Provide Quality assurance taking in to account the main DataGrid project characteristics:
  - Large software development (about 200 persons working on the project)
  - Long life cycle development (36 months)
  - Distributed development of software (21 partners)
  - Large scale integration (several Testbed sites)
  - Software portability (Linux, Solaris, ...), ....



## Quality objectives (2/2)

Overall quality plan:

◆ Year 1 - Focus on:

- Quality of the deliverables
- Project monitoring and reporting
- Software infrastructure

◆ Year 2 - Focus on:

- Quality of the software production
- User support
- Software distribution and Testbed infrastructure

◆ Year 3 - Focus on:

- Global Quality of Services provided.



# Quality deliverables & related deliverables

## ◆ Quality Plan (D12.1)

- Quality organisation - Project organisation - Risk management
- Document management - Document templates
- Software quality Assurance - Methods and tools used
- Configuration Management - Code repository, autobuild and bug tracking management

## ◆ Software Release Policy and Software release Plan (D12.3)

- Policy for iterative software releases including milestones, time-scales and supporting techniques and tools to be employed.

## ◆ Naming conventions (D12.2)

- Naming conventions, project directories organisation and comments conventions, that should be applied to all DataGrid middleware packages. The use of these conventions is strongly encouraged for Java, C++ and C.

## ◆ Configuration management and Build conventions (D6.2)

- Conventions for CVS module structure, naming and tagging, as well as package organization.



## Main Process Description





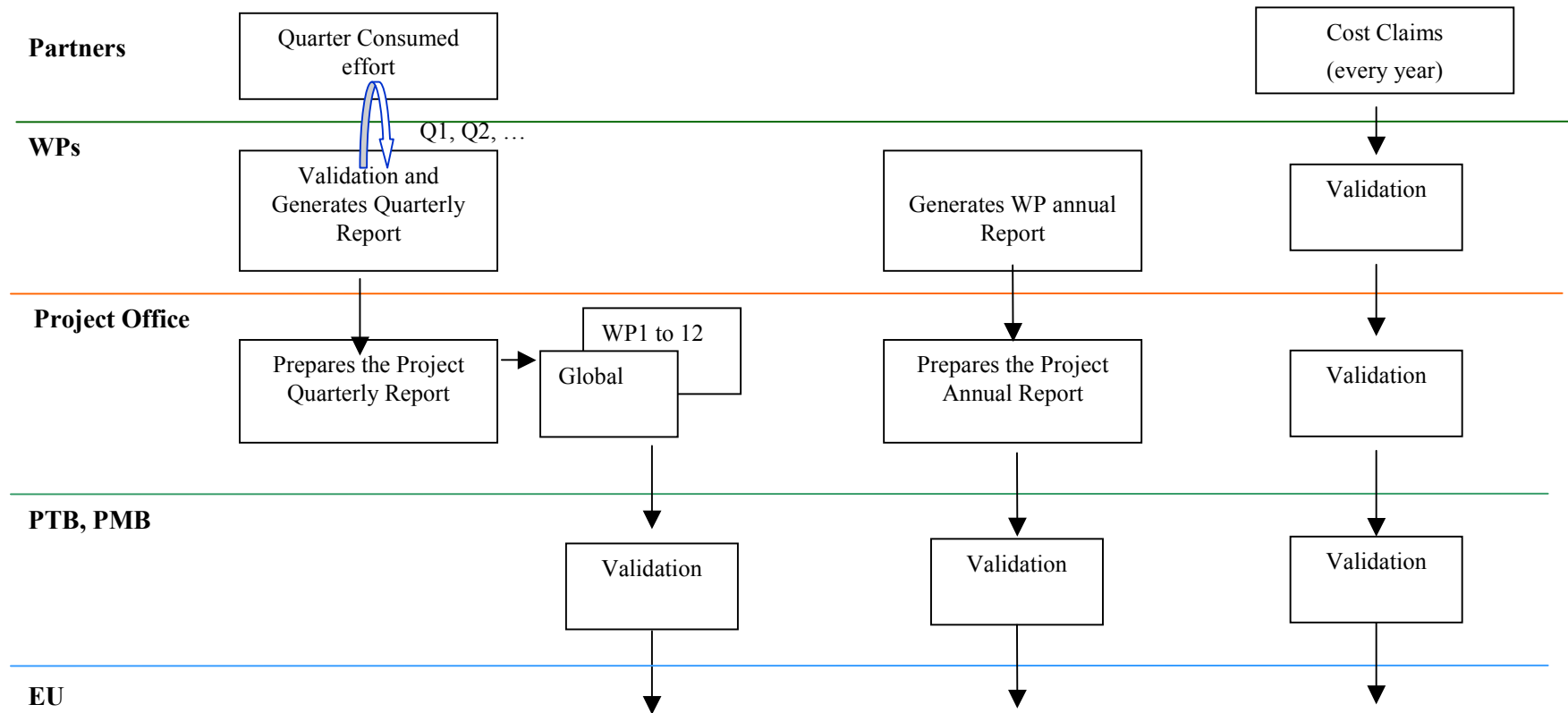
# Project Monitoring and reporting (1/3)

- ◆ Main project monitoring mechanisms:
  - WP Managers weekly meeting (Weekly phone conference calls)
  - Project Technical Board meeting ( every 2 months)
  - Project Management Board meeting (every quarter)
  - Quarterly and Annual Reports
  
- ◆ Agenda
  - Achievements
  - Status of milestones
  - Deviations
  - Issues, Risks
  - Meetings/Conferences/Papers/Dissemination
  - Resources



# Project Monitoring and reporting (2/3)

## ◆ Quarterly/Annual reports & Cost Claims process









# Project Monitoring and reporting (3/3)

- ◆ DataGrid website: Project management and technical part



The DataGrid Project

## Intranet Home



[DataGrid Home](#) | [Intranet Home](#) | [Search](#) | [EDMS Documents](#) | [People](#) | [Calendar](#) | [Glossary](#)

WP1 WP2 WP3 WP4 WP5 WP6 WP7 WP8 WP9 WP10 WP11 WP12 PMB PTB ATF

**Project Management**

**Project Structure & Contacts**

**Boards**

- PMB: Project Management Board
- PTB: Project Technical Board
- ATF: Architecture Task Force

**WP12: Project Management**

- Proposal (Technical Annex)
- Quality documents, Procedures, Templates
- Software release & Architecture
- Project Progress Reports
- WP Manager Meetings
- DataGrid Software license

**WP11: Dissemination**

**Deliverables**

**News**

**The Fourth DataGrid Conference will be held in Paris from 6 to 8 March 2002**

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**The EU review of the first year deliverables will take place at CERN the 1st of March 2002**

**Temporary agenda**

**Information about the Review**

**List of DataGrid participants**

**Software & Applications**

**Middleware**

- WP1: Work Scheduling
- WP2: Data Management
- WP3: Monitoring services
- WP4: Fabric Management
- WP5: Storage Management

**WP6: Integration Testbeds (software)**

- DataGrid Packages
- CVS repository
- Bugs report
- .....

**WP7: Network**

**Applications**

- WP8: Particles Physics
- WP9: Earth Observation
- WP10: Biology

Contact us

Last Update: 08/02/2002 16:54:54 (CET)



# Document Management

## ◆ EDMS: Cern Document Management Tool

- ◆ Document identification conventions
- ◆ Document Templates
- ◆ Deliverables review procedure
- ◆ Standardised document production tools: Word, Latex, pdf
- ◆ Standardised document management tool: EDMS

**DataGrid**

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ZAQUINE

**DataGrid**

- DataGrid
  - WP1: Grid Work Scheduling
  - WP2: Grid Data Management
  - WP3: Grid Monitoring Services
  - WP4: Fabric Management
  - WP5: Mass Storage Management
  - WP6: Testbed Integration
  - WP7: Network Services
  - WP8: HEP Applications
  - WP9: Earth Observation Applications
  - WP10: Biology Applications
  - WP11: Dissemination
  - WP12: Project Management
  - PMB: Project Management board
  - PTB: Project Technical Board
  - ATF: Architecture Task Force

**EDMS DataGrid** Home | Navigator | Search | Help | EDMS Site | Re-Login  
User: ZAQUINE

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EDMS ID: **CERN-000008164**  
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Documents in this node: 1 [Create Doc.](#) [Advanced](#)

**332859 v.1** **DATAGRID EDMS USER GUIDE** **In Work**

EDMS # 332859 Ext. Ref. Datagrid-12-NOT

The aim of this document is a quick start for DataGrid EDMS users.

[Doc. page](#) datagrid-12-not-332859-0-0-edmsuserguide 0 sub-doc 1 version

[doc](#) (454 Kb) [pdf](#) (808 Kb) [WP12](#)  
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NOTE

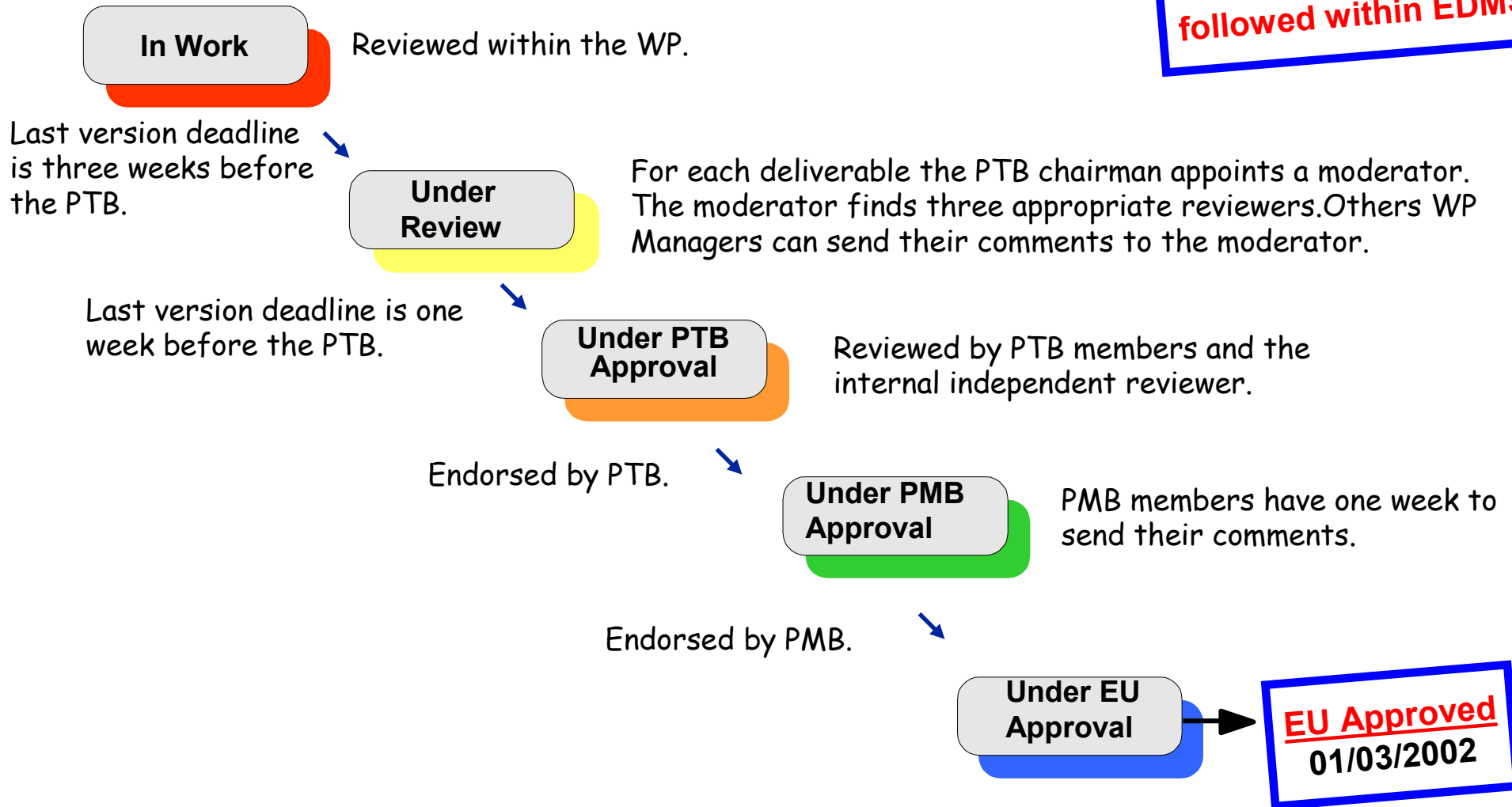
**Warning: EDMS will be unavailable during CERN XMas shutdown (from 21 Dec 2001 12:00 to 7 Jan 2002 9:00). Merry XMas and Happy New Year!**

**EDMS CERN** CERN EDMS WEB 2.1 - Tuovi & CERN ©2000 - 2001.12.19 - 12:11:47



# Deliverables Review Procedure

**Document Workflow followed within EDMS**

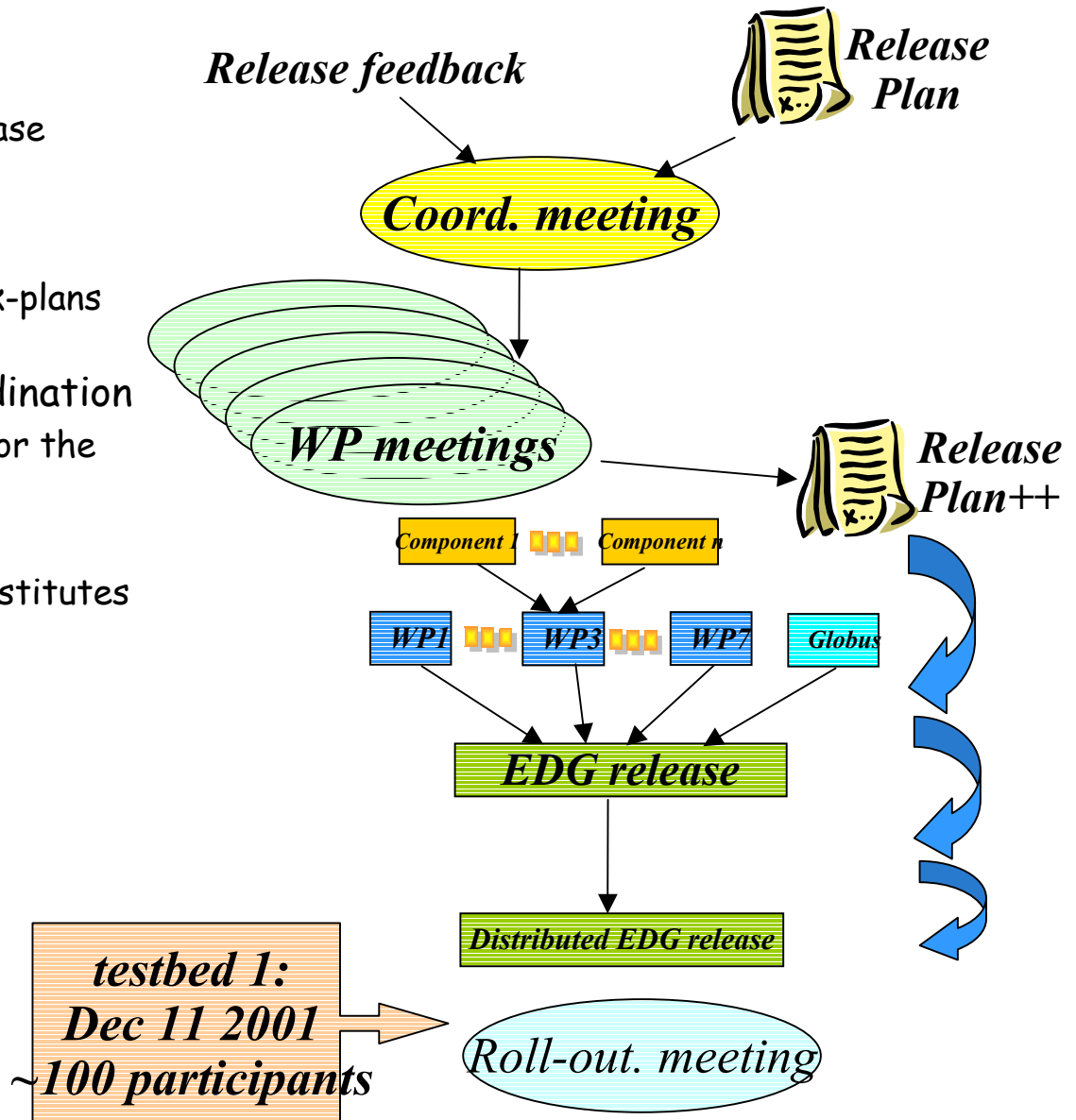






# Software Release Procedure

- ◆ Coordination meeting
  - Gather feedback on previous release
  - Review plan for next release
- ◆ WP meeting
  - WPs elaborate their specific work-plans for the next release.
- ◆ Software Release work-plan coordination
  - Establishment of an overall plan for the next release.
- ◆ Sw development
  - Performed by WPs in dispersed institutes and run unit tests
- ◆ Software integration
  - Performed by WP6 on **frozen sw**
  - Integration tests run
- ◆ Acceptance tests
  - Performed by the validation team.
- ◆ Roll-out
  - Present sw to application groups
  - Deploy on testbed



themed tech-meets



# Configuration Management, code repository, autobuild and bug tracking management

## ◆ Central repository

- DataGrid code is managed within a central repository. This repository consist of a CVS server for source code and a package repository to distribute the packaged code. The repository is hosted by WP6.

## ◆ Autobuild system

- Performs nightly rebuilds of the DataGrid code (based on build conventions D6.2)
- Reports on results on a web page
- API documentation is generated from source code and published on the website
- An autocheck procedure will perform basic functionality tests

## ◆ Bug reporting and tracking

- Centralised via Bugzilla



## Standards and tools

- ◆ Documentation production: Ms Office, Latex, pdf
- ◆ Documentation Management: EDMS
- ◆ Code Management: CVS
- ◆ Build tools: autoconf, automake, ant
- ◆ Bug tracking: Bugzilla
- ◆ Auto-documentation tools: Javadoc, Doxygen
- ◆ Coding rules checking tool: Code Checker
- ◆ Testing: junit, cppunit



## Plan for the next year

- ◆ Year 2: Focus on Quality of the software production, user support, software distribution and Testbed infrastructure
  - Improve and extend the infrastructure and toolset to facilitated software development, integration and distribution: Automatic build, autocheck, result notification, test plan.
  - Empower Iteam to control quality of contributed software and documentation.
  - Refine requirements priorities and coverage tests plan.





## Summary

From the quality point of view,

- ◆ For the first year, the quality focus was on:
  - Quality of the deliverables
  - Project monitoring and reporting
  - Software infrastructure
- ◆ The second year will further incorporate the benefit of successive software releases as defined in the Software Release Policy document.