LHCb Offline Application Framework

Status

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Project Goals (reminder)

- Development of an O-O framework for the LHCb data processing applications (simulation, reconstruction, analysis). Completed by 2000.
- Periodic releases with added functionality.
- Release 1.0 at the end of this year. The functionality:
  - Definition of input/output data. Job parameters.
  - Loop over events. For for event, access MC data truth from ZEBRA files produced by SICB.
  - Provide placeholders for analysis user code.
  - Output results in form of histograms and/or ntuples.

Progress from last 2 weeks

- The design of the architecture is more or less finished
- Main activity has been reviewing for each of the components:
  - Description. What's the component functionality, interfaces and dependencies.
  - Interface specifications. Detailed calling sequences.
  - Top level design of the component.
- Small prototypes to understand various aspects: interfaces, templates, exceptions, …
- Studied more practical aspects like the "packages".

Architecture Design Document

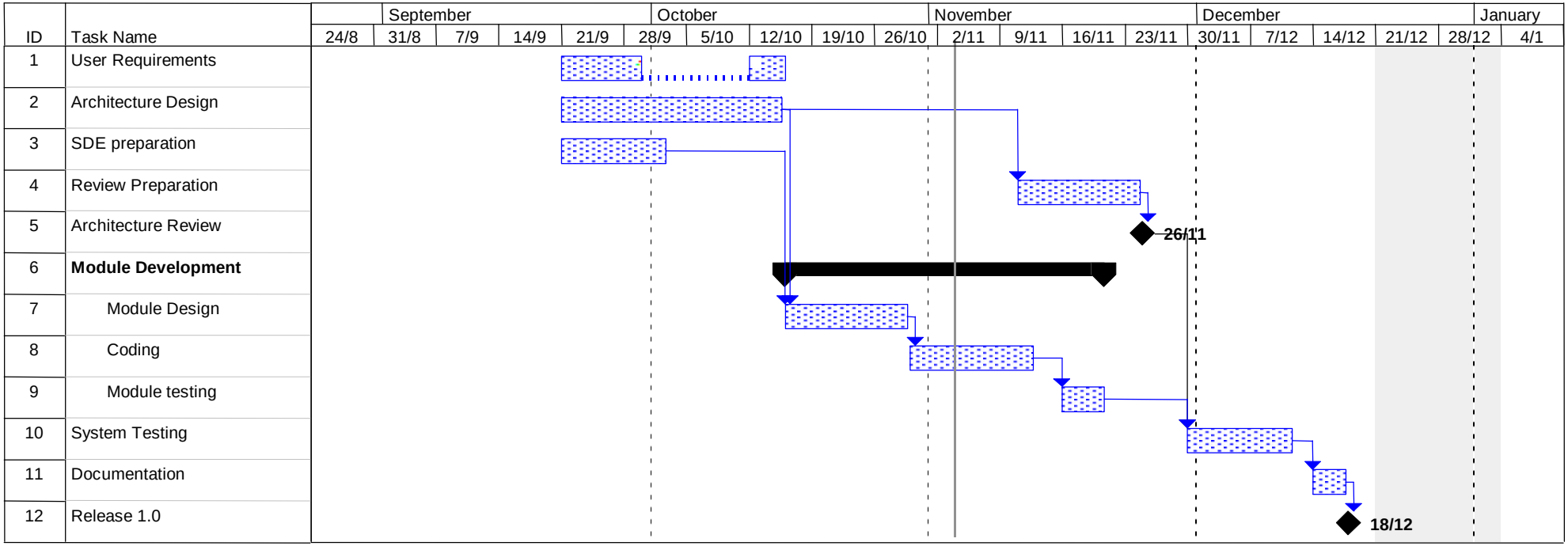
- Needs to be finished before the Architecture Review (26-Nov)
- Contents:
  - Design choices and justifications.
  - Overview of the architecture.
  - Use cases.
  - Description of each component.
- Most of the material exists already.

Components

Domain	Components	Who	Deliverables		
			Description	I/F Specs	Design
Data processing	Application Manager	PM	A		A
	Algorithm Interface	PMy	A		A
	Job Options Service	MC	R		
	Event Selector	IL	A(30/10/98)		
Event data model	Event Data Service	MF	R	A A	A
	Event Persistency Service	MF	A	A A	A
	Transient Event Model	PB	A	NA	A
	Persistent Event Model	PB	<<later>>		
Detector data model	Detector Data Service	MF	A		
	Detector Persistency Service	MF			
	Detector Data Model	PB, AT			
Histogram model	Histogram Service	IL	A(30/10/98)		
	Transient Histogram Model	IL	A(30/10/98)		
	Histogram Persistency Service	MF			
Visualization	Visualization components	JH, IL	<<later>>		
	Graphical Representation Service		<<later>>		
User Interface	Interactive User Interface	PMy	A		
	Message Service	MC			
Converters		PB, IL	A		
Networking	Distributed Object Management		<<later>>		
	System kernel	IL, PB	A(27/10/98)		
	Transient Data Store	PM	A		A
	Data Item Selector	PMy	A		

(A=Available, R=Reviewed, I=Implemented, NA=Not Applicable)

Project tracking



- Maintaining the already accumulated delay.
- First lines of code are starting to appear.