MBSE Telescope Workshop II – GMTO Tools and Configuration Management Overview

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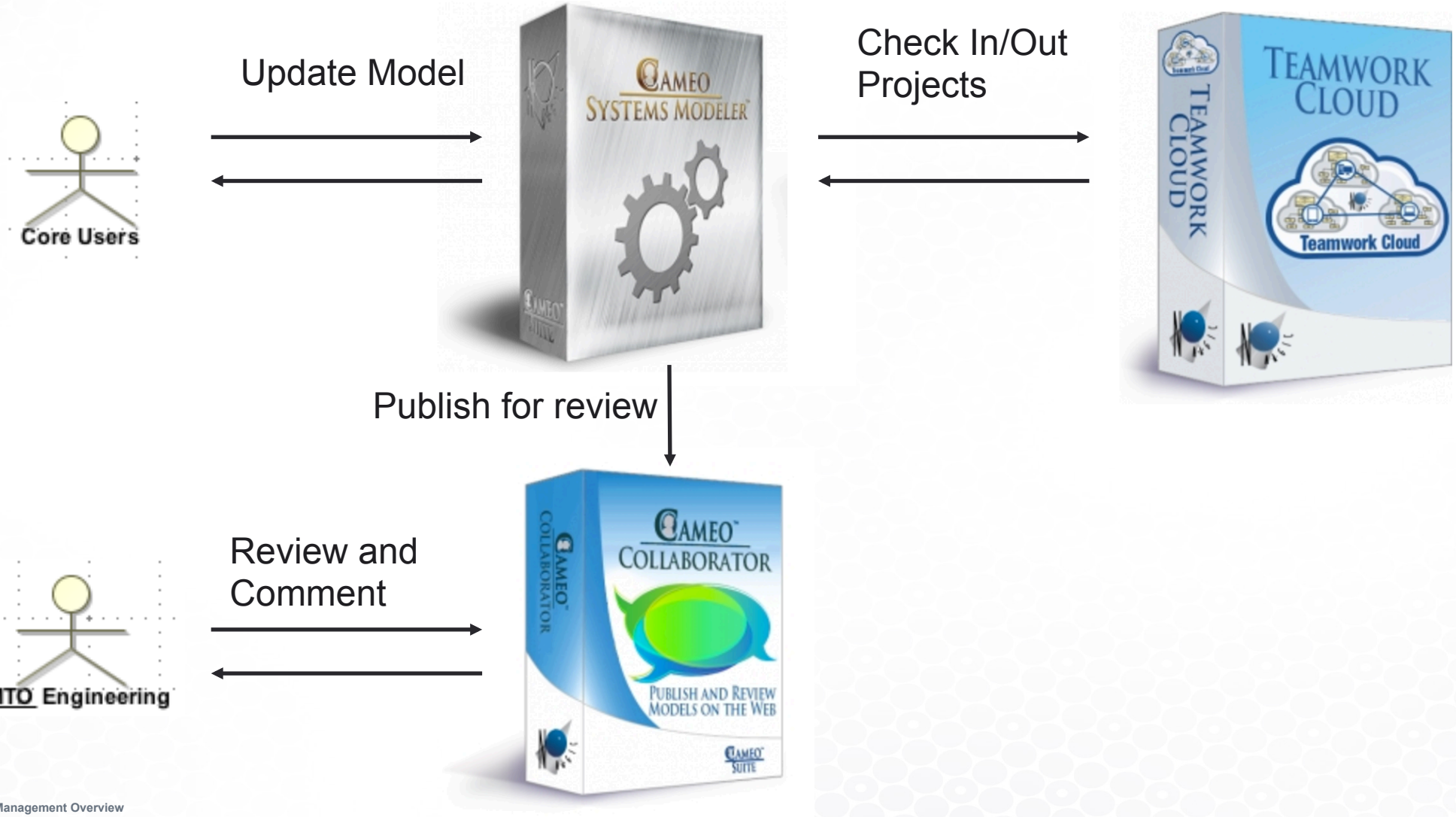
No Magic 18.5 FR (Feature Release)

Tool Usage Overview



Cameo Systems Modeler/Teamwork Cloud 18.5

- Tested Multi-user Teamwork Cloud functions
  - Locking model for model/content edit
  - Updating project
  - Unlocking and Committing Project to Server
  - Branching
  - Diffs and Merging (Using two-way Merge Plugin)
  - Configuration controls
  - User controls

- Assessment is that current version is sufficient for our small core team to effectively use. Must follow procedures with clear communication.

Teamwork Cloud Check In/Out

History

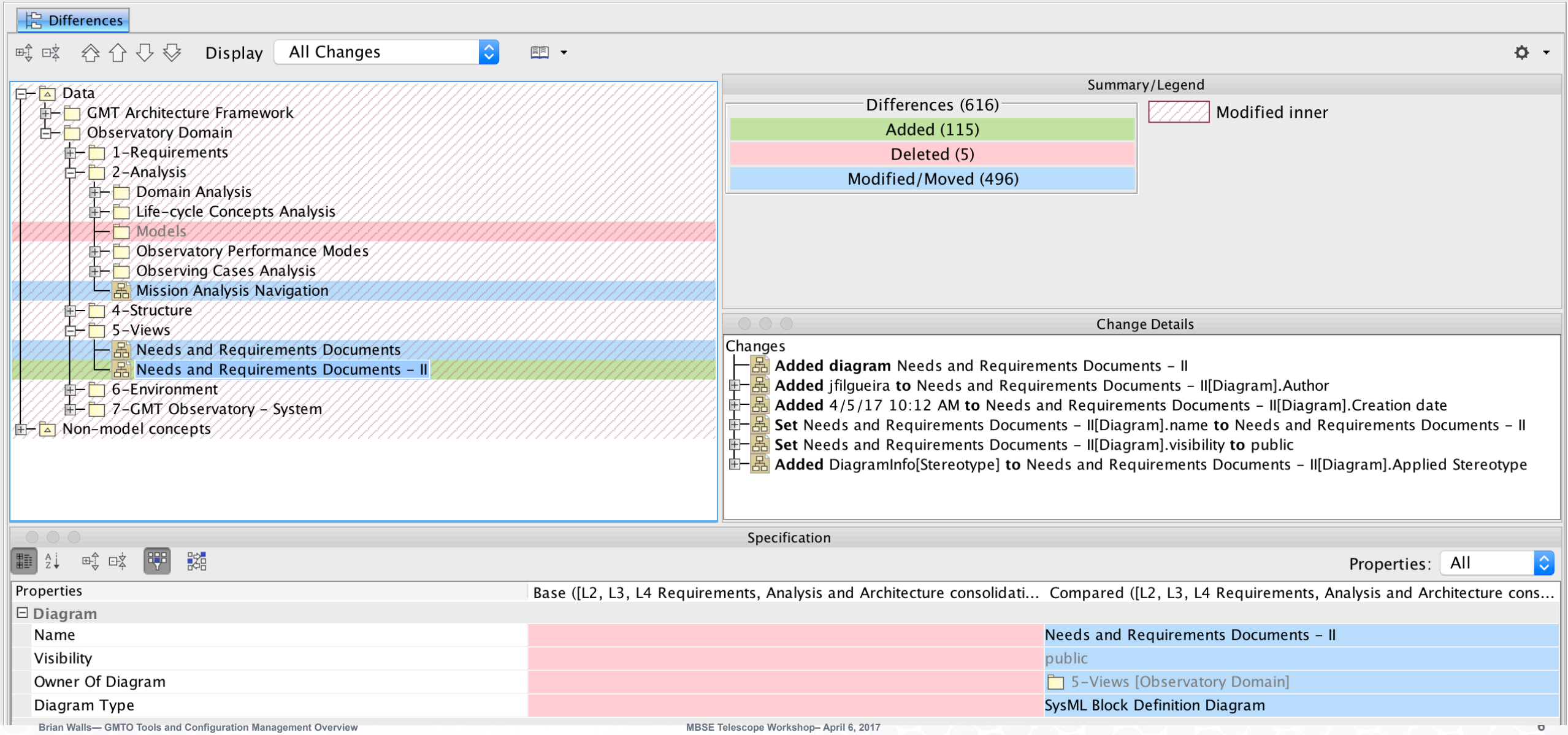
History Browser

In order to open a specific project version, select a node with a corresponding version number in the Version tree and click Open.

sys_model_v32 [L2, L3, L4 Requirements, Analysis and Architecture consolidation]

Project ...	Author	Date	Comment
⊟ This ...			
22	jfilgueira	February 23, 2017 at...	Sync Subsystem BDDs with proposed PT
21	jfilgueira	February 22, 2017 at...	update product tree and document tree
20	jfilgueira	February 21, 2017 at...	Add note to model navigation diagram
19	jfilgueira	February 21, 2017 at...	updated product tree
18	bfordham	February 18, 2017 at...	Mount DRD release changes.
17	bfordham	February 16, 2017 at...	Added images.
16	jfilgueira	February 16, 2017 at...	Regenerate AGWS structure decomposition map
15	jfilgueira	February 15, 2017 at...	
14	bfordham	February 15, 2017 at...	Included introductions and preamble text, as per Mount DRD v8+ (11 Feb 2017).
13	jfilgueira	February 15, 2017 at...	Add analysis navigation view
12	bfordham	February 15, 2017 at...	All Mount requirements updated to match Mount DRD v8+ (11 Feb 2017) Word doc. No preambles, images, eqns.
11	jfilgueira	February 15, 2017 at...	Update Domain Analysis overview
10	bfordham	February 14, 2017 at...	
9 ...	jfilgueira	February 14, 2017 at...	Add configuration analysis overview
8	jfilgueira	February 14, 2017 at...	Add configuration analysis overview
7	bfordham	February 14, 2017 at...	
6	jfilgueira	February 13, 2017 at...	Refine model navigation and usability
5	bfordham	February 13, 2017 at...	Updates to Parents (from Cockpit export), updates from Mount DRD v8+.
4	jfilgueira	February 13, 2017 at...	Review top level structure add model navigation diagram
3	jfilgueira	February 13, 2017 at...	Clean up top level diagrams
2	jfilgueira	February 13, 2017 at...	Add numerical ordering to package structure for Optics subsystems

Teamwork Cloud Difference Viewer



Project Comparison Report

Project Comparison Report

Differences Report

No Magic, Inc.

Report generated on March 24, 2017

By jfilgueira

1.2 Scope

Base project	Compared project
sys_model_v32	sys_model_v32
41	43
442902 Elements	444090 Elements
770 Diagrams	772 Diagrams

1.3 Overall changes

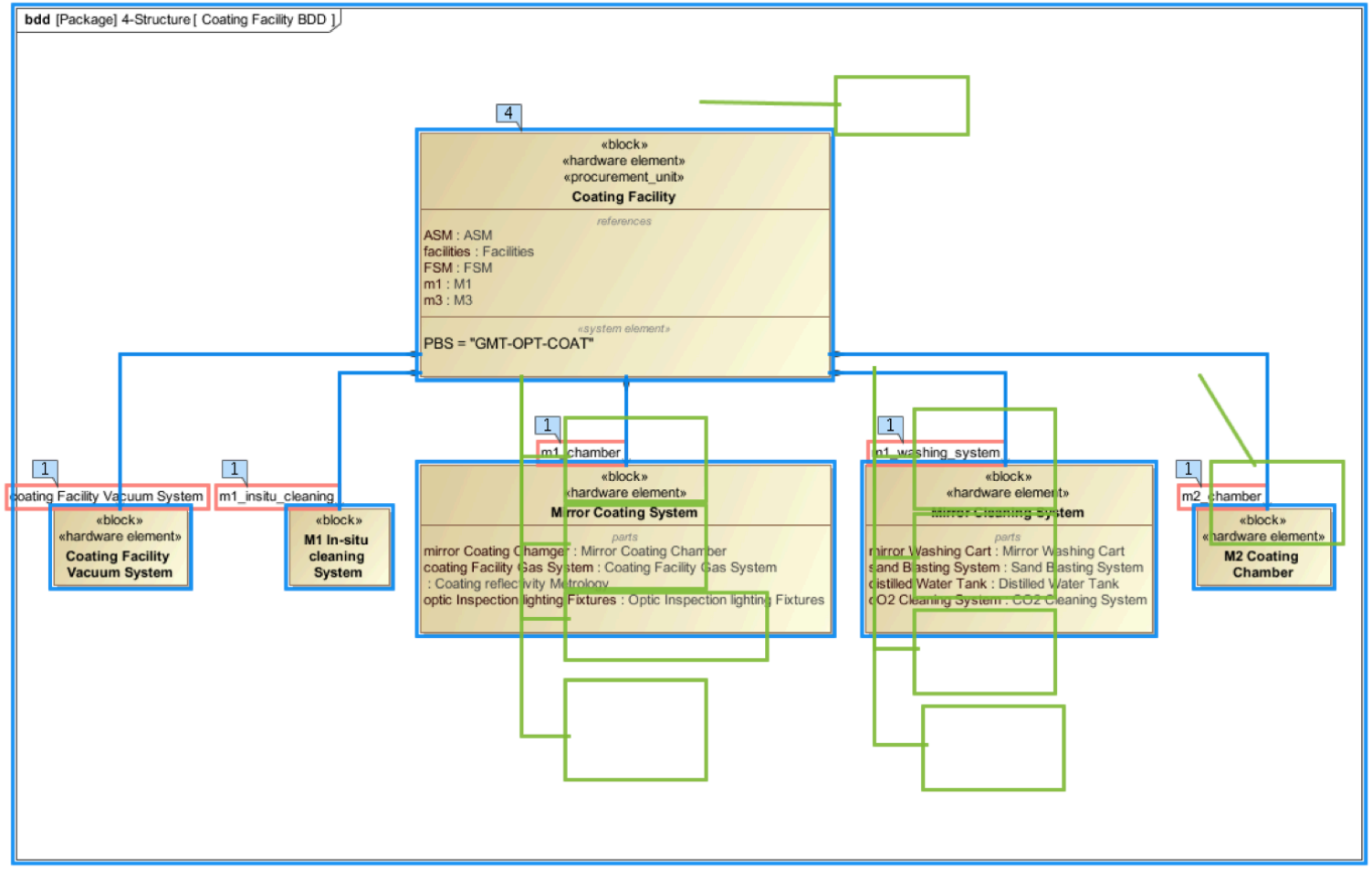
606

Overall changes

75	492	39
Added	Modified	Removed

Project Comparison Report (Base Project)

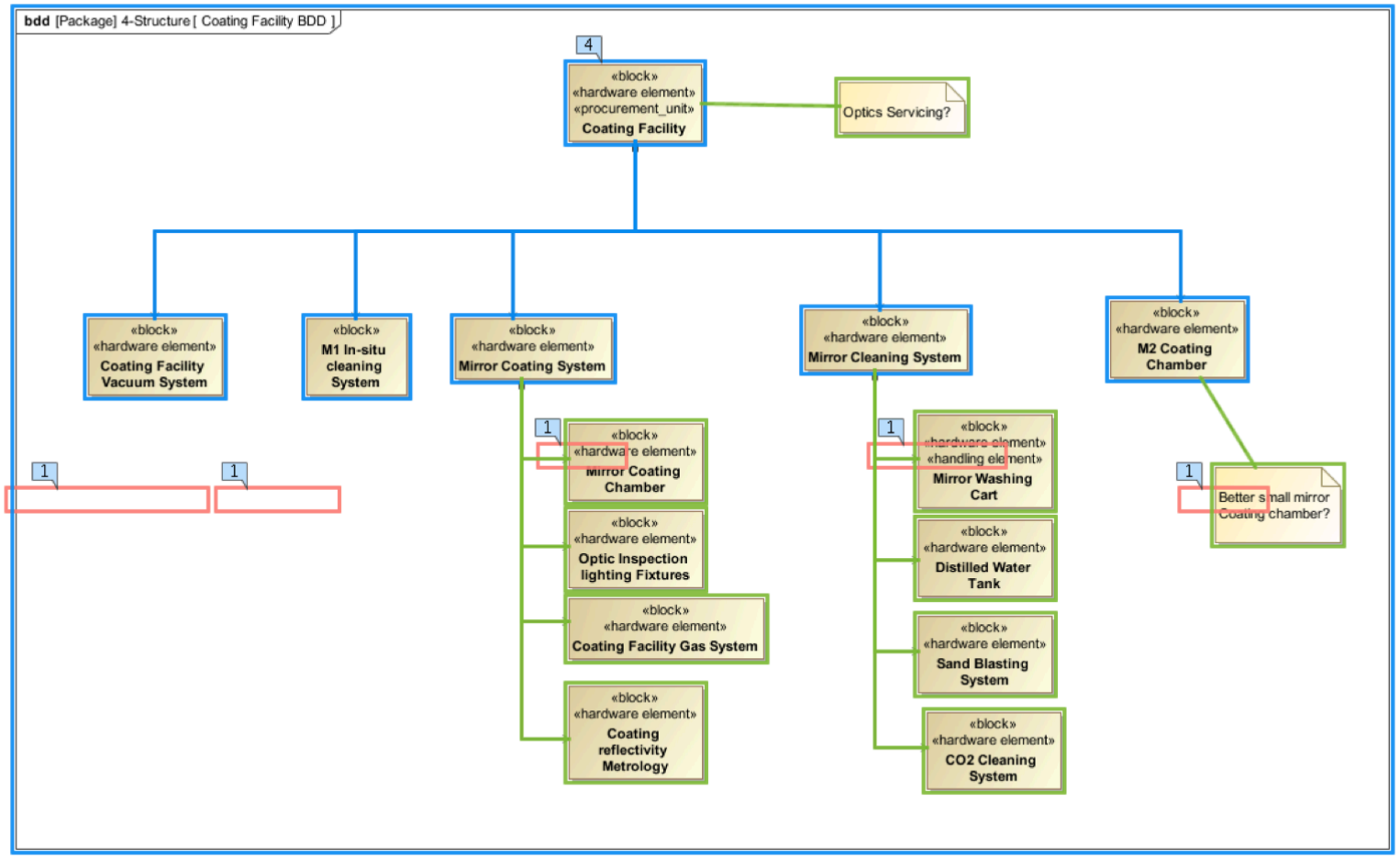
Base project



Compared project

Project Comparison Report (Comparison Project)

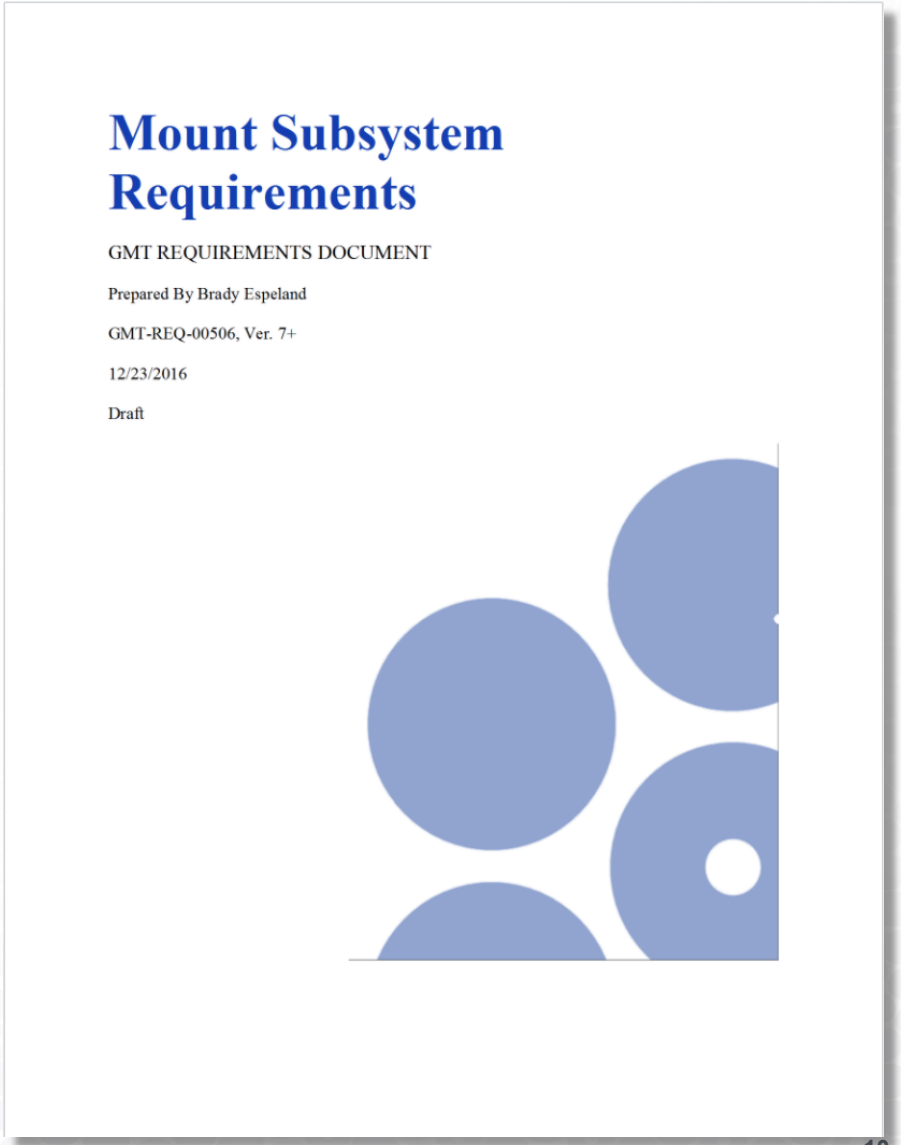
Compared project



Documentation Generation

- Contractual documentation required in the form of .doc or .pdf
  - Requirements, System Design Descriptions
  - Looking for solution for exporting, near finished and familiar, documents from model

- Development work with No Magic through support contract
- Started with easy document - Science Requirements export with little to no post processing
- Second sprint – Mount DRD (215 pg. complex doc)
- Using modified VTL Word Template – Specific to DRD.
- Headless, automatic generation



Mount export with different styles

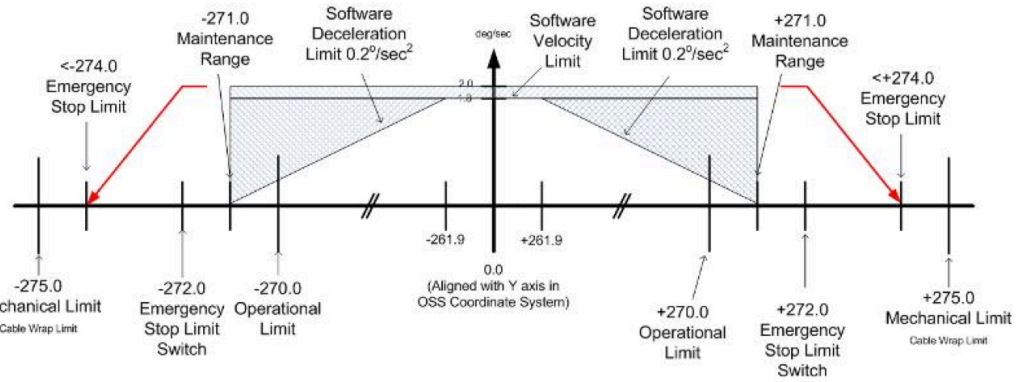


Figure 3.1: GIR Axis Range and Limits as Defined by the Mount Reference Design.

3.3.3.1 General

REQ ID & Title	Reqt Statement	Rationale	Support Text
TS-MNT-7677 : Mount - GIR Operational Acceleration	The bidirectional acceleration rates of the Mount GIR shall be at least 0.2°/sec2.	Flow down from parent.	
TS-MNT-7675 : Mount - GIR Maximum Rate	The Mount GIR shall have a bidirectional maximum slew rate of no greater than 2.0°/sec.	Flow down from parent.	Note: This is the minimum value that shall be used for the design of all hardware.
TS-MNT-7673 : Mount - GIR Mechanical Range	The mount GIR axis shall have sufficient range of motion to come to a complete and safe	Flow down from parent.	Note: The centre of this range is with the GIR Y axis aligned with the OSS Y axis.

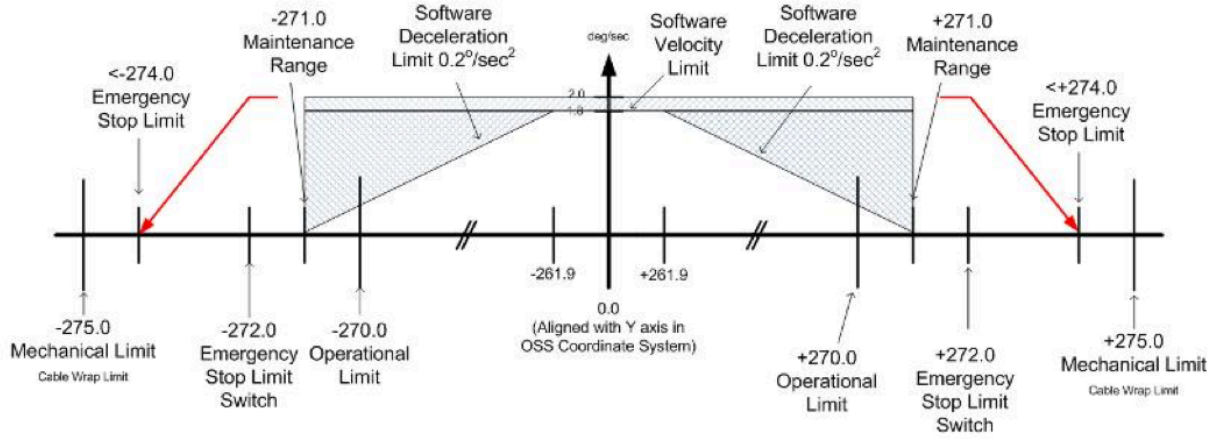


Figure 3.1: GIR Axis Range and Limits as Defined by the Mount Reference Design.

3.3.3.1 General

TS-MNT-7677 : Mount - GIR Operational Acceleration – The bidirectional acceleration rates of the Mount GIR shall be at least 0.2°/sec2.

Rationale: Flow down from parent.

TS-MNT-7675 : Mount - GIR Maximum Rate – The Mount GIR shall have a bidirectional maximum slew rate of no greater than 2.0°/sec.

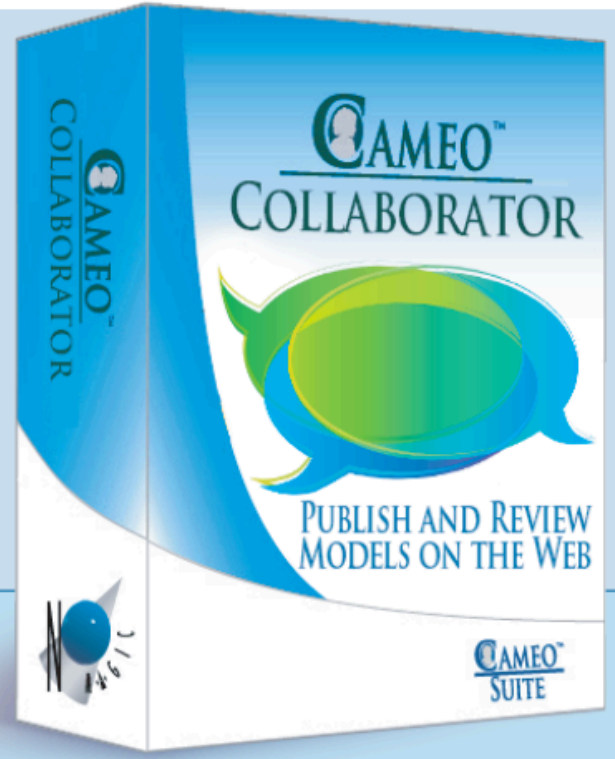
Note: This is the minimum value that shall be used for the design of all hardware.

Rationale: Flow down from parent.

TS-MNT-7673 : Mount - GIR Mechanical Range – The mount GIR axis shall have sufficient range of motion to come to a complete and safe stop from the GIR Maximum Rate after either Over-Travel Limit is activated.

Note: The centre of this range is with the GIR Y axis aligned with the OSS Y axis.

Cameo Collaborator 18.0 SP4



CAMEO
COLLABORATOR

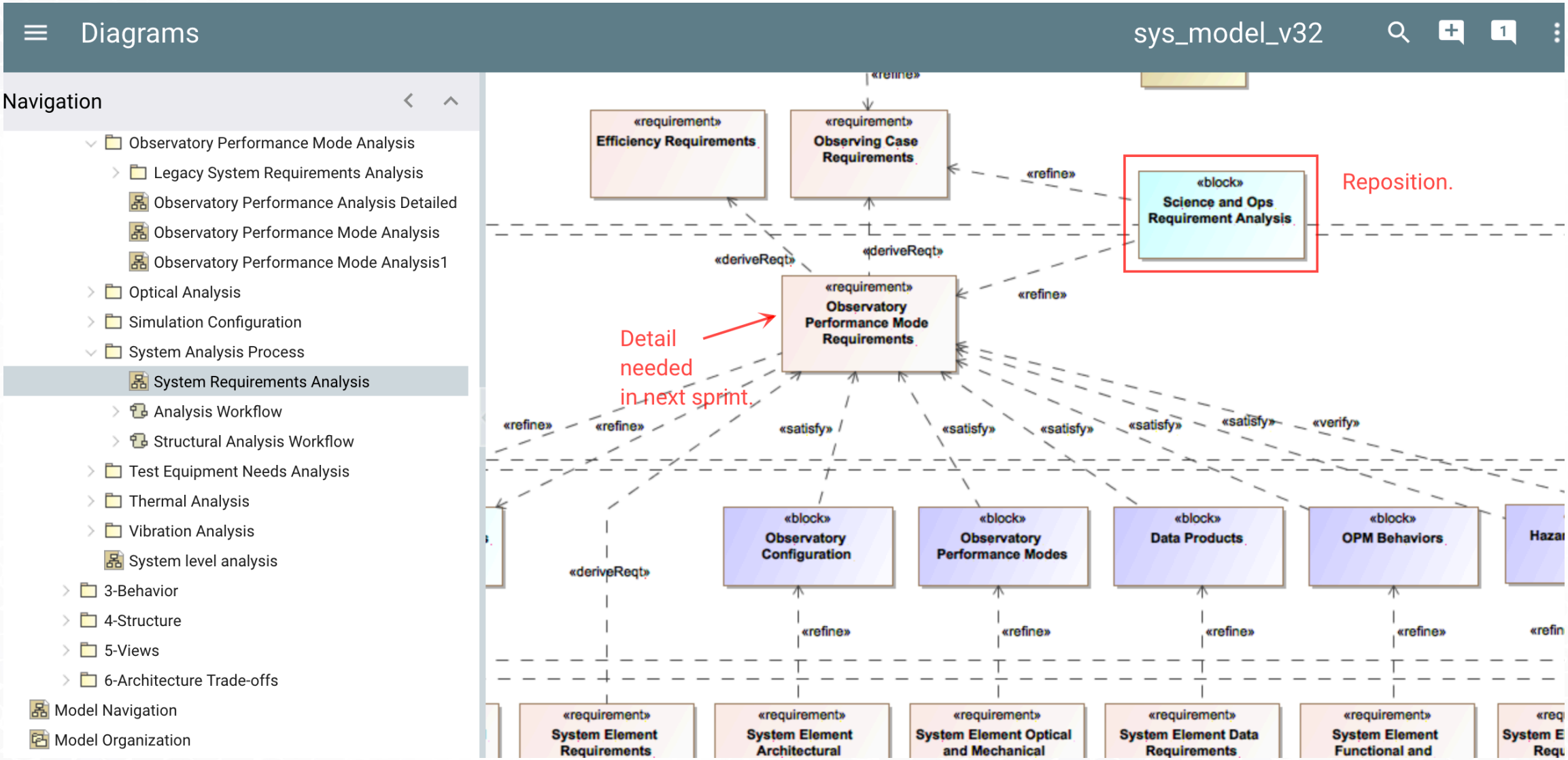
Cameo Collaborator helps teams easily review model contents by connecting model authors, reviewers, and stakeholders on the web.

Cameo Collaborator 18.0 SP4

- Tested Multi-user Cameo Collaborator functions
  - Sharing with users
  - Review workflows
  - Graphical Redlining
  - Textual comments
  - Comment and Redline export to Word for reporting
  - Comment Workflow
  - Export times – 1-2 minutes for typical DRD, 10+ minutes for Entire Model

- Assessment is that SP4 adds functions that brings Collaborator to a state that will easily meet our review needs. Can't say the same for previous versions.
- Future versions may allow web editing (considering usage)

Cameo Collaborator - Graphical Comments



Cameo Collaborator - Textual Comments

CANCEL SAVE

Document created - Update Note | High Priority

Please use GMT-CAD-012376.

Text	Rationale		
The Mount shall have an altitude over azimuth structure.	Flowdowm from parent requirement. Note: Level 3 architectural requirement missing.	Note: The altitude over azimuth structure design is described in the Telescope Mount Design GMT-TEL-DOC-00703.	Inspe
The Mount shall have an instrument rotator to compensate for field rotation and deliver a non-rotating field of view to Direct Gregorian and Folded Port instruments mounted on the rotator.	Required due to the alt-azimuth tracking motion.	Note: Performance requirements for the Gregorian Instrument Rotator (GIR) are in sections 3.2 and 3.3.	Inspe
The Mount shall provide clear paths to deliver the focused beam of the Telescope to Science Instruments and the Wavefront Sensors.	The Mount is not to obstruct or vignette the focused beam from the primary mirrors. Requirements TS-MNT-12472, TS-MNT-13327 & TS-MNT-13329 control the allowable obscuration of the incoming beam.	Note: The focused beam of the Telescope is defined in drawing GMT-TBD.	
The following section contains performance requirements that apply to the whole Mount with all payloads installed			

Cameo Collaborator 18.0 SP4 (Reporting)

Project sys_model_v32

Comments Report from Cameo Collaborator

No Magic, Inc.

Report generated on Apr 05, 2017 11:33 PM
By Brian Walls

1 Summary

1.1 Overview

2
Comments in total

0	2
Resolved comments	Unresolved comments

0
Replies in total

0	0
Resolved replies	Unresolved replies

1.2 Statistics by names

Brian Walls	2 comment(s)	0 reply(-ies)
Last activity	Apr 05, 2017 11:35 PM	

Backup Slides