MCS Data flow for July 2018 tests

DocId: PFS-ICS-PRU030001-01

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2018-June-14

Overview

This document provides a summary of the data flow amongst key subsystems involved in the MCS commissioning tests in July 2018. The aim for this diagram is to help focus data analysis, reduction and visualization tool development.

Changelog

Issue #	Author Initials	Summary of Changes
1	HS	Initial version.

Introduction

Following the discussions related to the preparation of visualization and associated tools for the upcoming MCS commissioning tests in July 2018 during the System Engineering telecon 2018-05-22 (minutes here), it was felt a need for a diagram to help focus efforts in relation to the identification and further development of these tools. This diagram would depict the main subsystems involved in those MCS tests, the main flow of data between those subsystems, points where tools would intercept the data for analysis, reduction and visualization.

Data flow

The flow of data across the various subsystems is shown in the following diagram.

Analysis tools (jupyter kernel + scripts) [S]

Necessary? More convenient to use disk instead

DB

Analysis (notebooks) [L]

Disk (images)

2018-06-05T18:56:00

Target positions, distortion map (Initialisation)

measured $(X,Y)_{MCS}$

Calculated $(X,Y)_{PFI}$

```
gotoField
niter=0
```

measured $(X,Y)_{MCS}$ [centroids]

MHS Exposure, shutter control

mcsActor [M]

PFSC Images

Camera

fpsActor [S]

Cobra Ops

Coord Transformer

Cobra Control (charmer)

Init + updated $(X,Y)_{PFI}$

FPGA

movement

Cobras

LEGEND

[S]	ics-shell	→	MHS
[M]	MCS computer		Not for July
[L]	Local laptop		