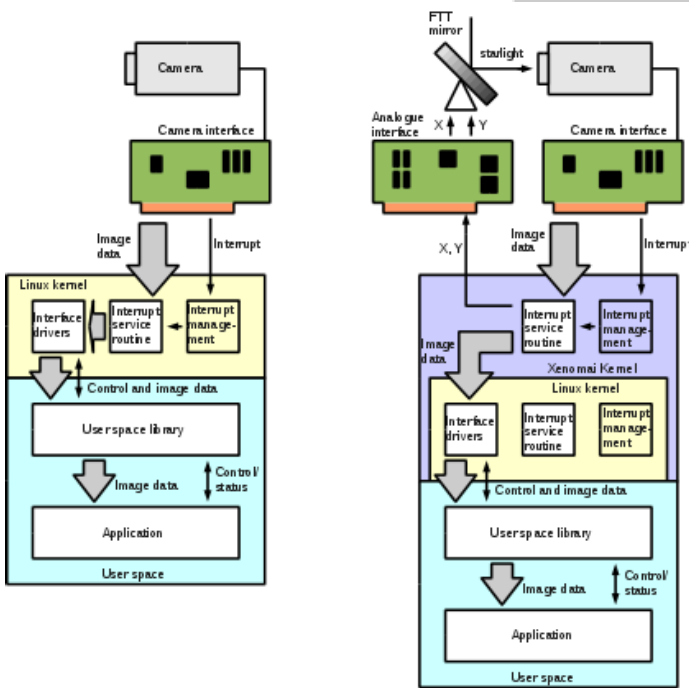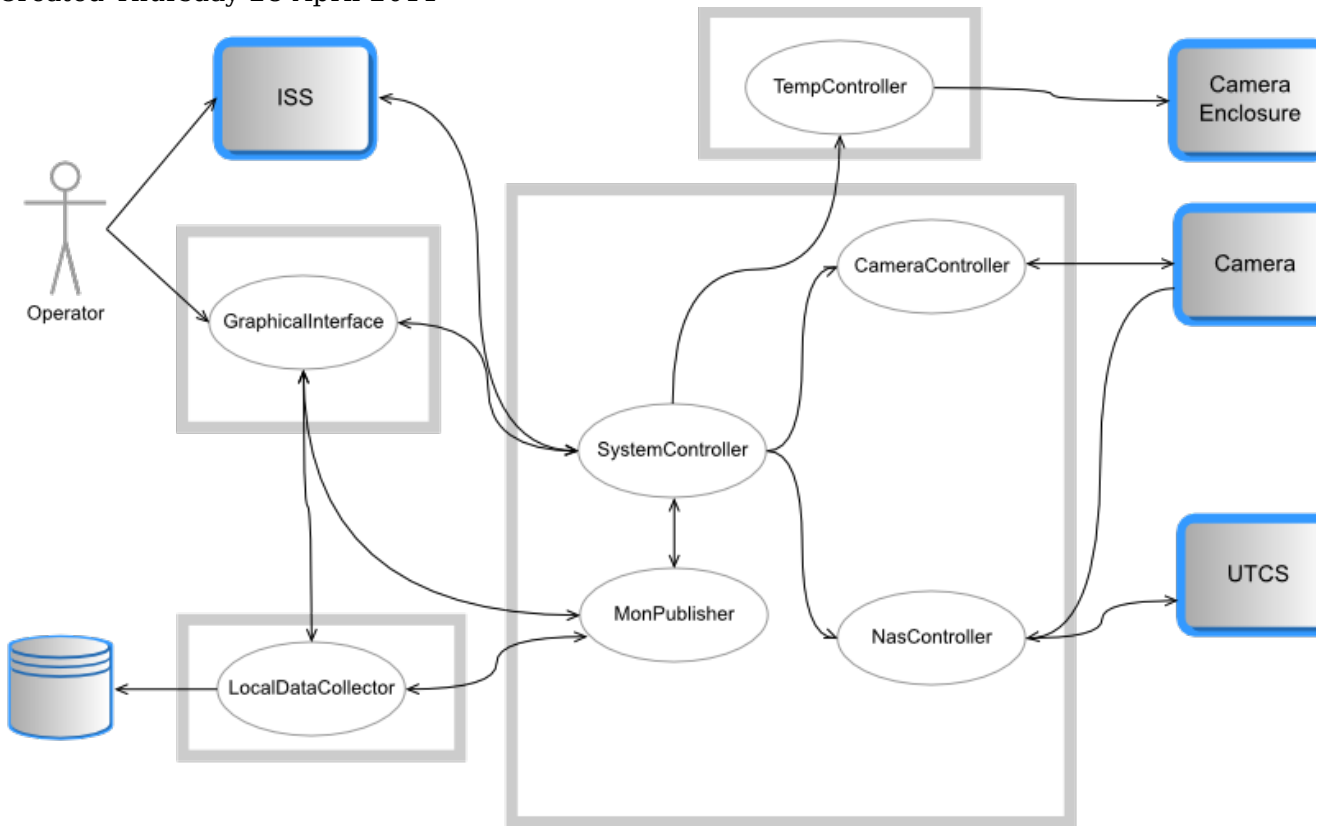# SoftwareDesign

Created Thursday 28 April 2011

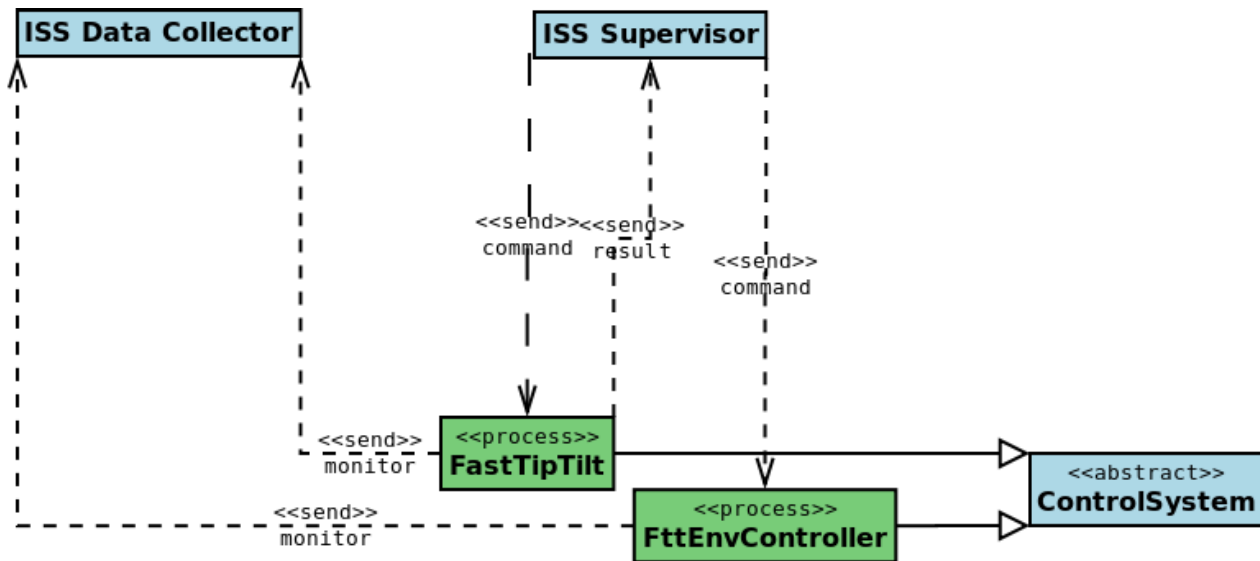(a)   (b)

Open Issues

- Do we use real-time (FTT) architecture for FLC?
  - Need to refine RT architecture
- No use of ZeroMQ? (as mentioned in CoDR report)

- Need to try out fasttime

Architecture: ISS Interfaces

See also GenericSystemInterface
See also FirstLightCameraCommands

- Diagram applies for FTT/NAS and FLC - for FLC FastTipTilt class will implement a subset of the FTT/NAS commands and monitor points.
- SystemController and NasController tasks both part of FastTipTilt class
- POSIX thread for each asynchronous command
    - Will be async commands for at least Dark, Flatfield and Acquisition Check modes
- No polled monitor points; published when data available
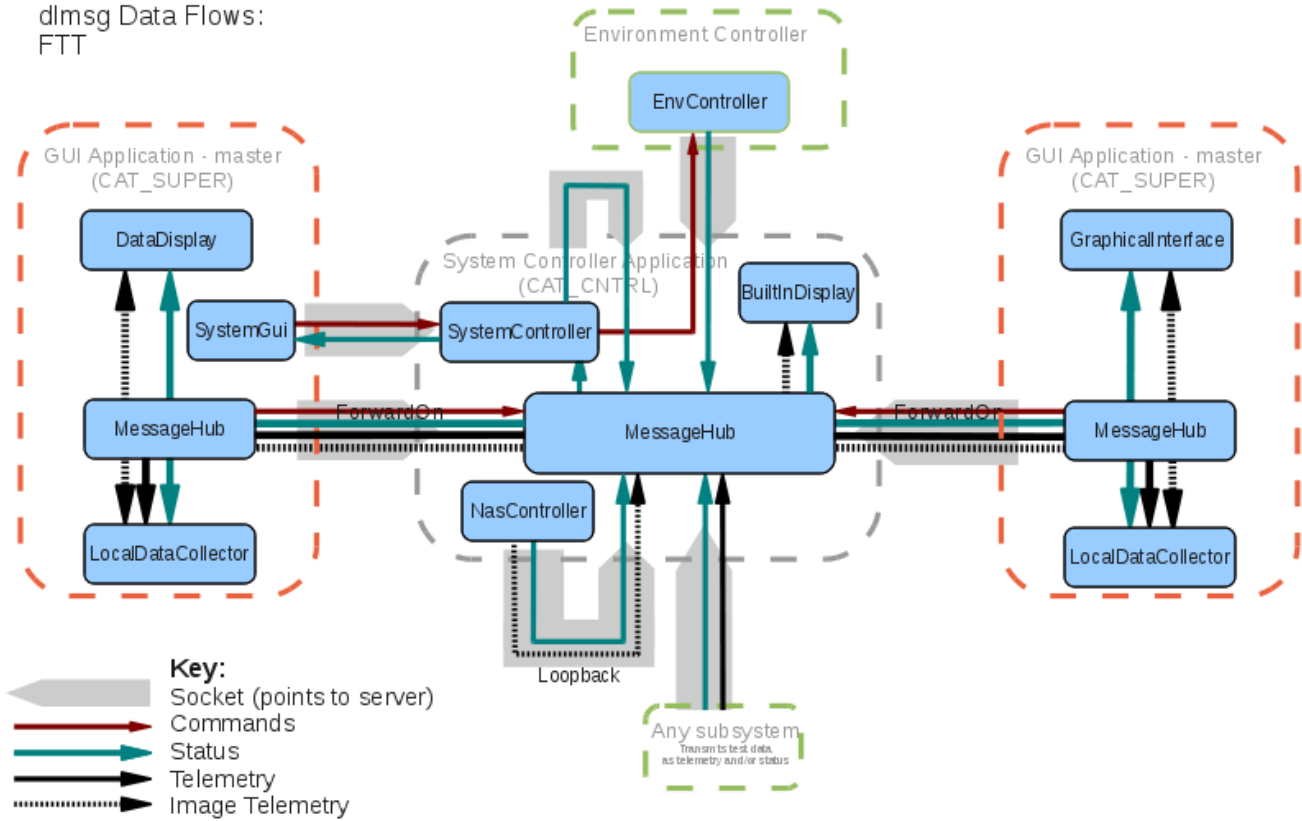
Architecture: internal dlmsg data flows

Latest software architecture in TechnicalNotes/Software/InternalMessagingProposal.odt
See also FirstLightCameraCommands

Other internal dataflows not shown:

- Image data to userspace (NasController)
- NasController to ISS monitor data (includes acquisition/tracking offsets)
- Image data as command result to ISS supervisor

dlmsg Data Flows:
FTT

Environment Controller

EnvController

GUI Application - master
(CAT_SUPER)

DataDisplay

SystemGui

MessageHub

LocalDataCollector

System Controller Application
(CAT_CNTRL)

SystemController

BuiltInDisplay

MessageHub

NasController

ForwardOn

ForwardOn

GUI Application - master
(CAT_SUPER)

GraphicalInterface

MessageHub

LocalDataCollector

Loopback

Any subsystem
Transmits test data,
as telemetry and/or status

Key:
Socket (points to server)
Commands
Status
Telemetry
Image Telemetry

MessageHub implemented.
Logger: Initial implementation of LocalDataCollector which writes images to binary table
columns.