Benefits of Ground Plug and Play

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Background on PNP

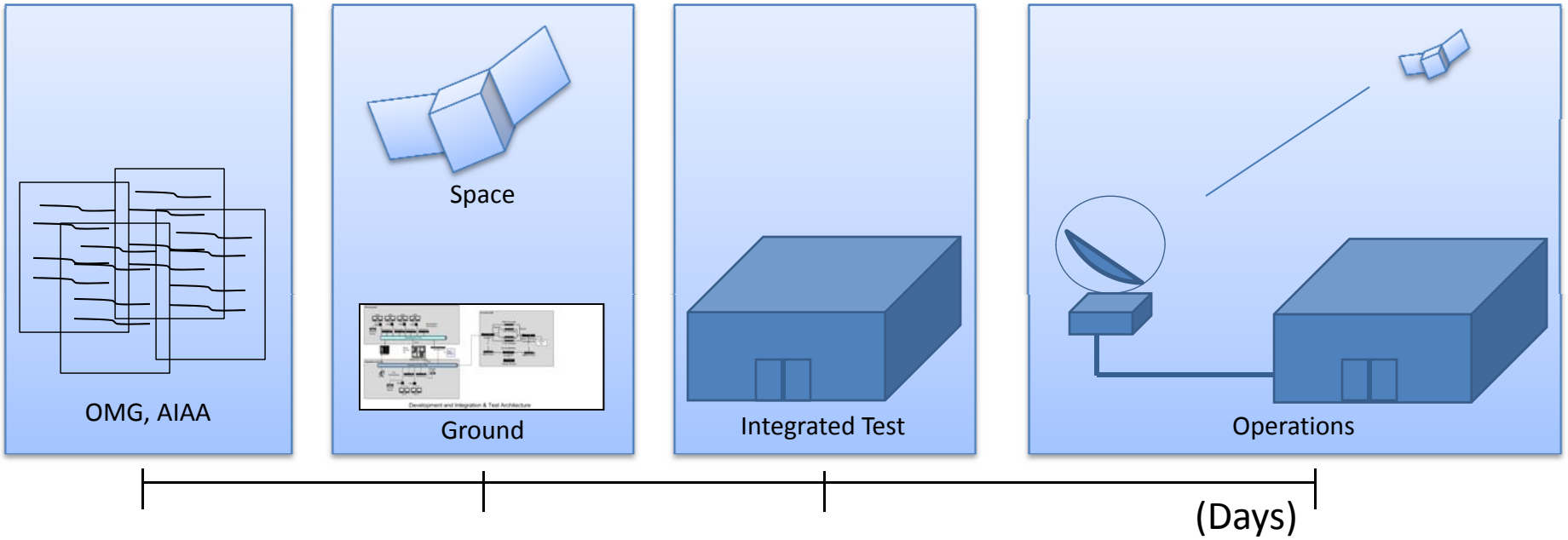
- Space Segment to reduce amount of time and money required to deploy, launch and fly asset
- Space Plug and Play (PnP) viable technology
  - Standards based
  - Architecture supports rapid deployment

Ground benefits at a glance

- Timely creation of ground system for Space Plug and Play (PnP) based assets
- Utilization of OMG and AIAA standards, XTCE and xTEDS, to generate ground representation of space assets
- Rapid deployment of initial or updated command and control systems
- Generation of telemetry screens based on component and / or subsystem definition

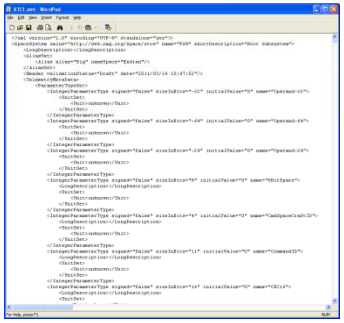
Timeliness

- Augment the Space Plug and Play initiative by providing ground systems which utilize PnP architecture and standards definitions
  - Matching space segment's cost and timeliness objectives

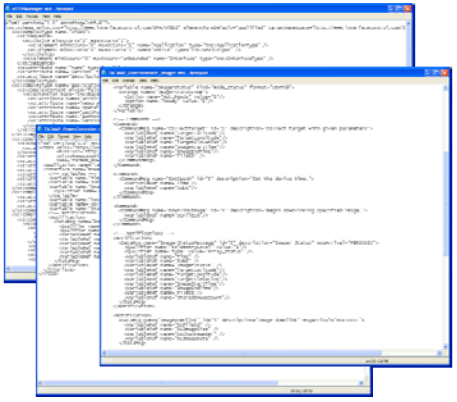


Standards conformance

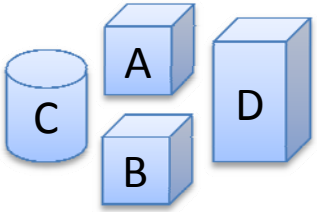
- Ingest and translate command and telemetry data definitions
  - Utilizing XTCE and xTEDS standards

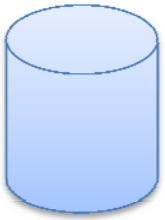


XTCE

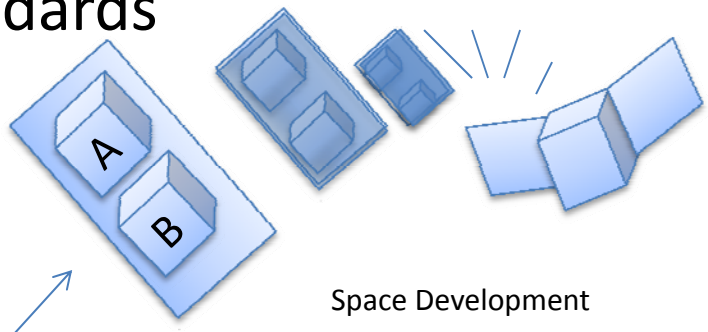


xTEDS

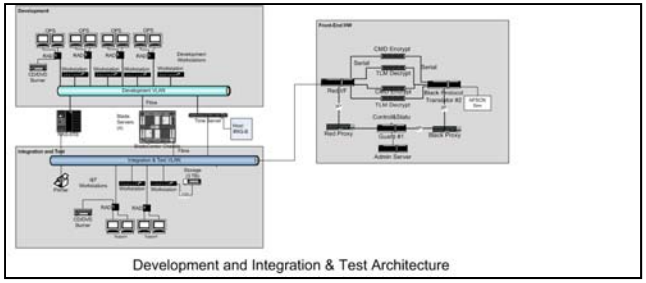




Cmd and Tlm DB



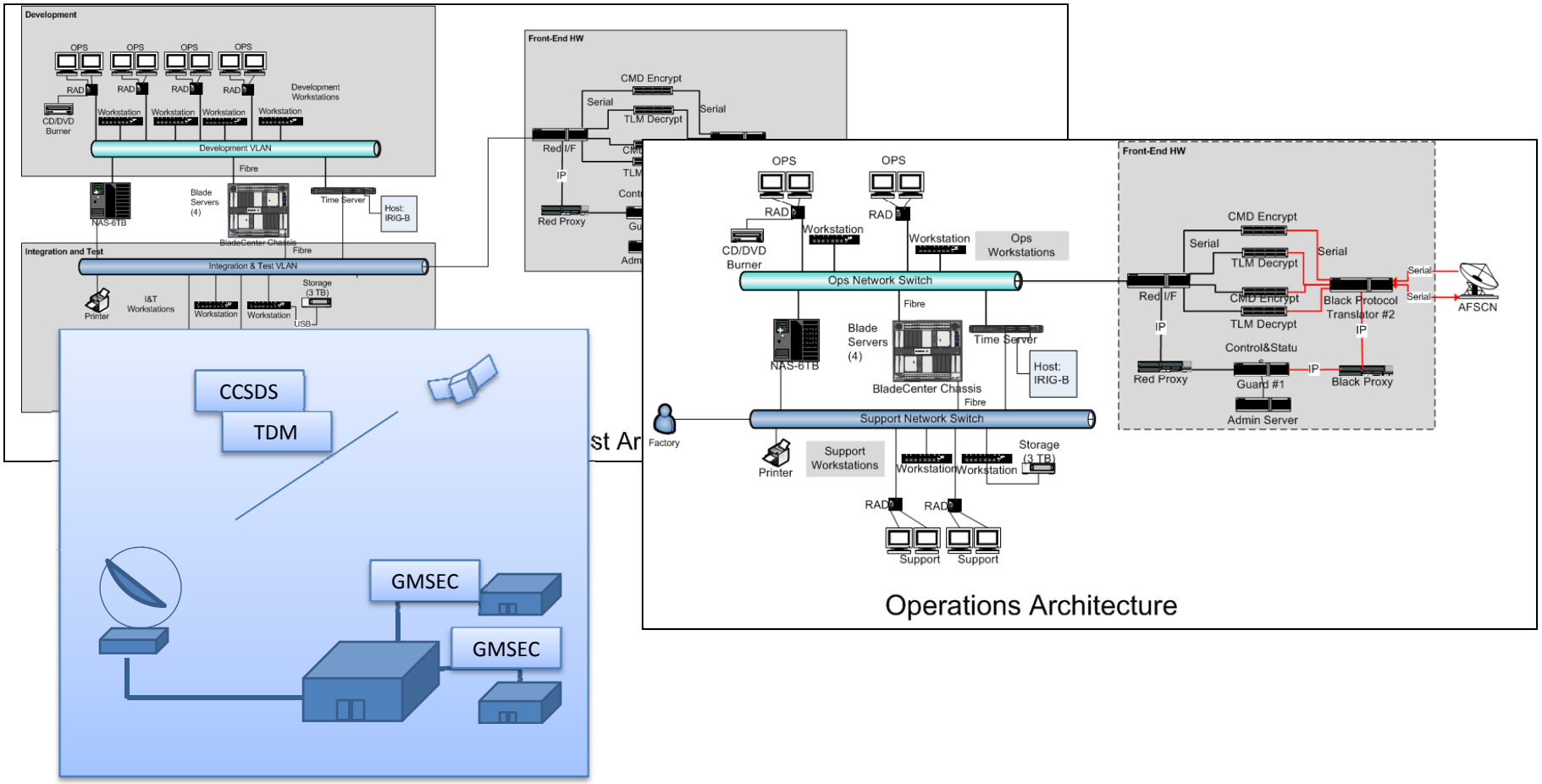
Space Development



Ground Development

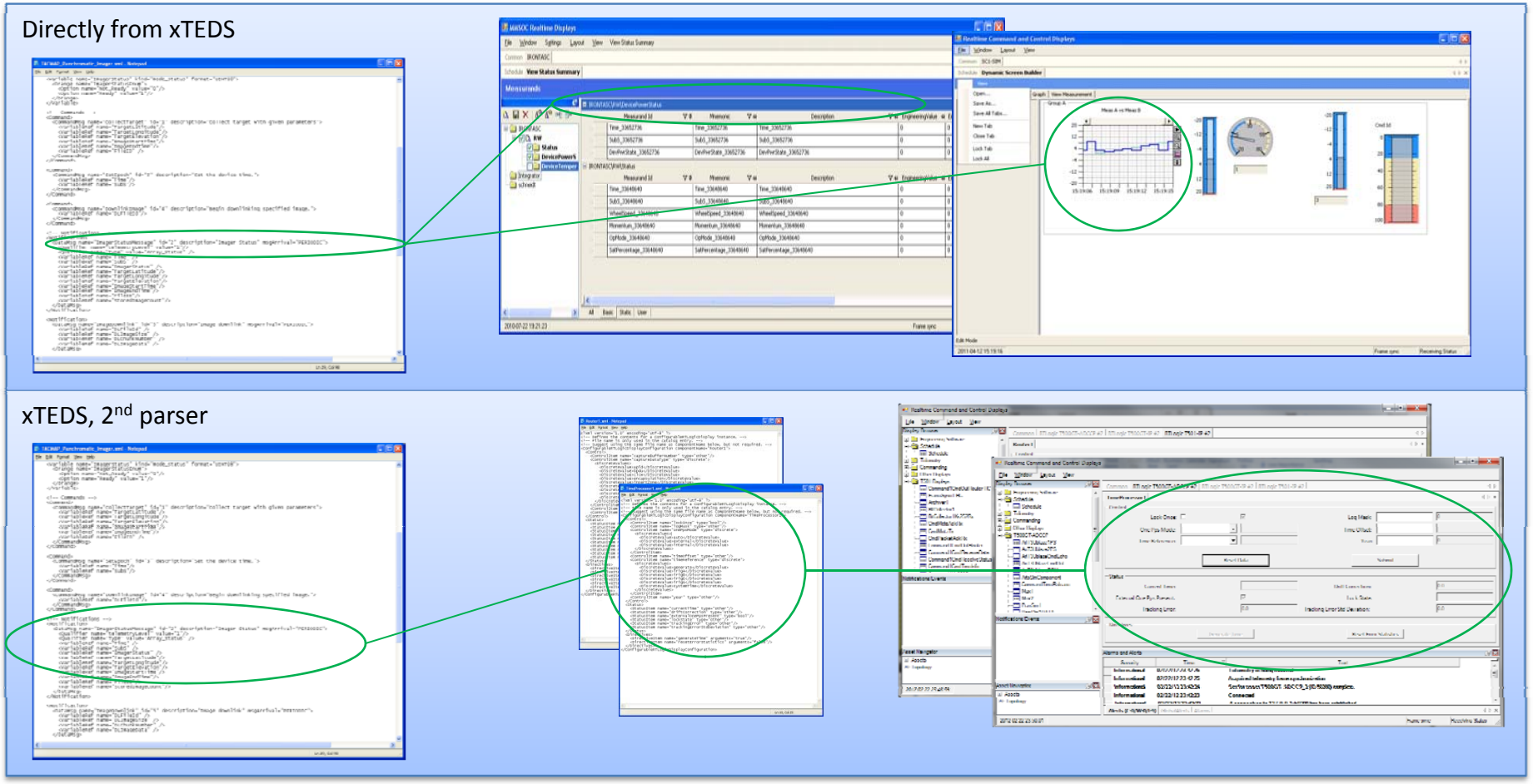
Deployment

- Rapid generation of deployments
  - Creation and modification of test, operation and other



Screen Generation

- Generate screens based on definition files
  - Text and other control based displays



Conclusion

- Ground must be able to match the pace set by space when building a PnP asset
  - Accomplished by utilizing standards to rapidly generate ground deployments matching system specification