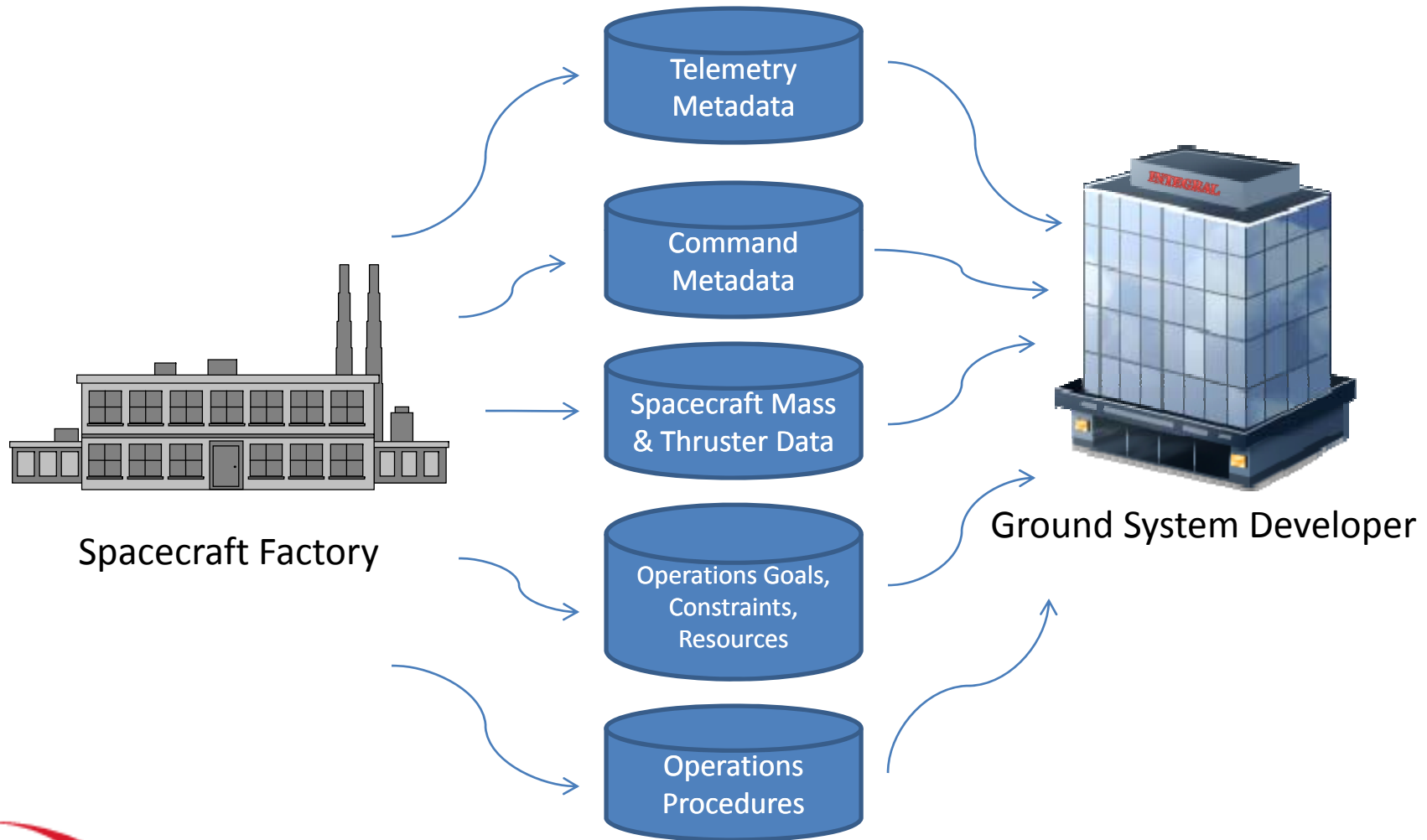


The Marriage of Flight Software to Ground Systems

Gerry Simon

Spacecraft developer to Ground System Developer data exchanges



Observations



- Spacecraft & Ground System developers are not always interested in each others success
 - Oftentimes competitors
 - Spacecraft builders all have capable I&T systems
 - Compete for the same program dollars
 - Schedule can become a big game of chicken
- Data Exchanges are not a one time event
- Engineers are not *great* communicators
 - Vocabulary is not the same
- Spacecraft oftentimes outlive the ground system
- Holy Grail is a simple data transfer for mission handover

Recommendations



- Incentivize team success
- Understand each other's development lifecycle
- Limit creativity by Flight software team

... then ...

- Use available exchange standards
 - Business process models (UML & BPMN)
 - T&C metadata (XTCE)
 - Procedures (SOLM)
- Develop missing standards