

Asynchronous Management {*Architecture|Template|Protocol*}

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APL

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Intersection: Spacecraft and Data Center?

How do we manage partitioned networks, such as:

- New Space Networks
- Challenged Sensor Networks
- Vehicle Networks
- Resource-Constrained Networks
- Disruption-Tolerant Networks

Spacecraft have this problem, what do they do?

- Autonomy models
- VERY efficient encodings
- Low requirements for processing.

Can we bring these worlds together in an IETF-useful way?

Spacecraft Fault Management Systems

- Stim/Resp Systems
- Heritage Implementations
- Deterministic Processing

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- Mission Specific Tools
 - Less Infrastructure Funding
 - Network CONOPS

Terrestrial Network Management - Datacenters

- Lots of Standards
- Open-source tools
- Large Investments

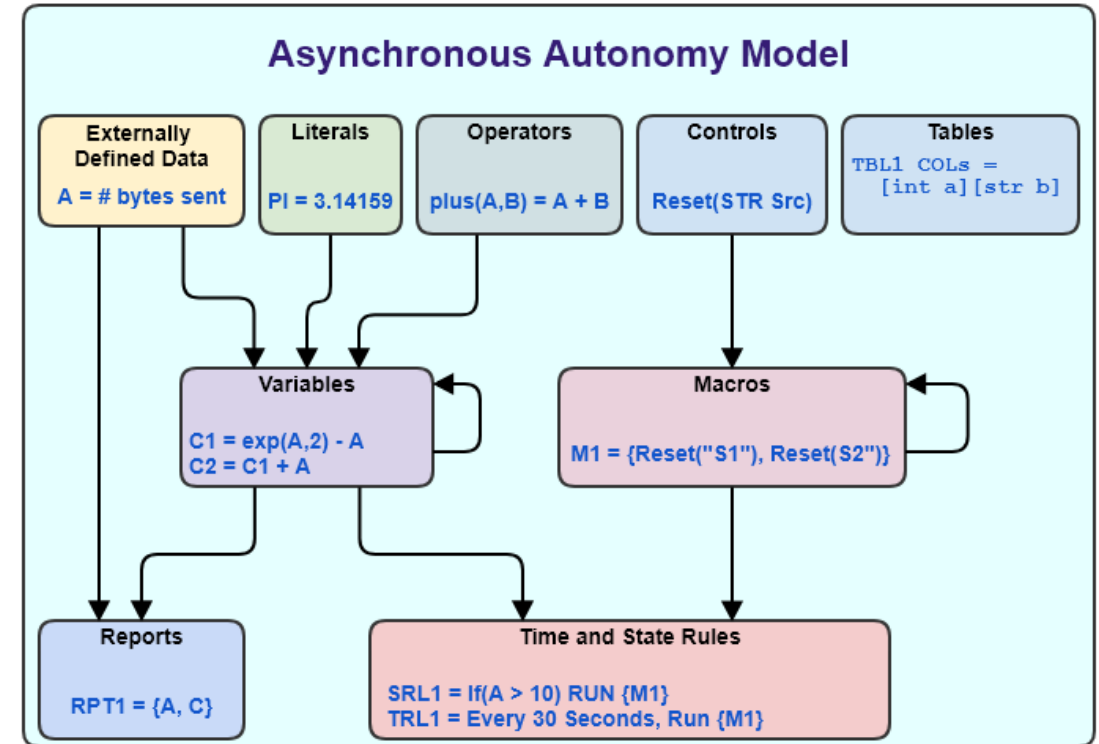
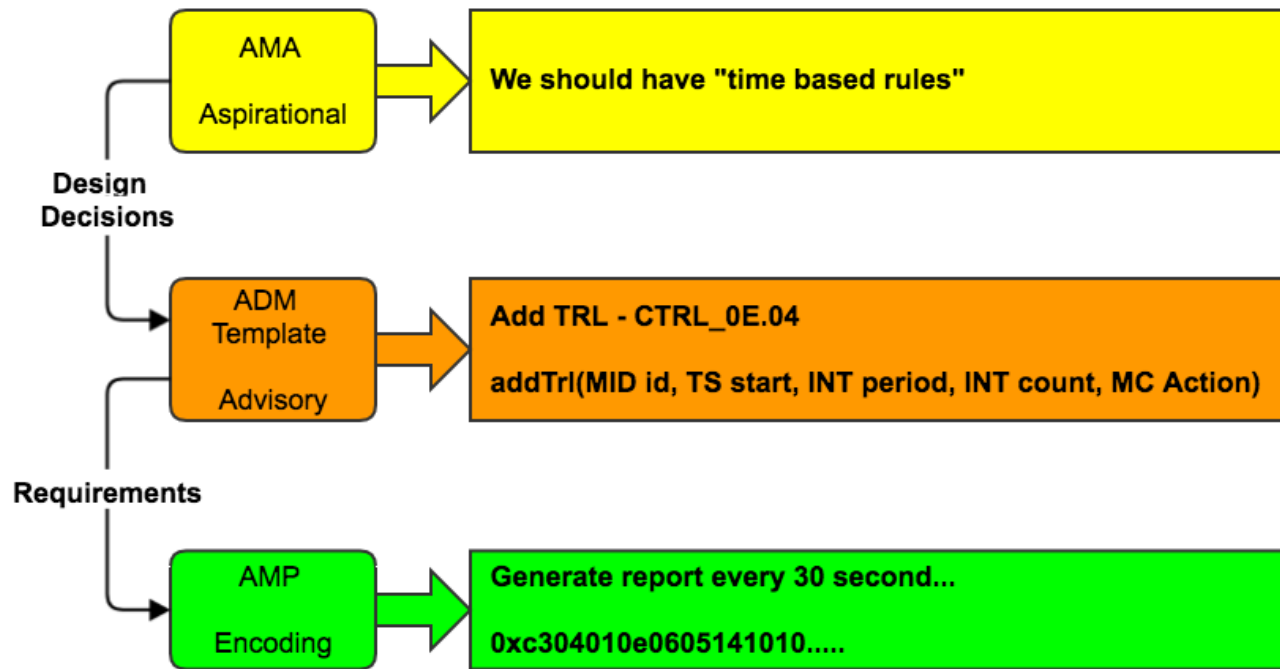
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- Immature autonomy
 - Inefficient implementations
 - Inefficient protocol layering

What does a healthy intersection of these worlds look like?

- Automation and Autonomy Model
- Network Management Standards
- Compatibility with commercial work

AMA/ADM/AMP Interactions

Asynchronous Management is network management via configured, deterministic autonomy.



It is defined as:

- (1) An Architecture - <https://tools.ietf.org/html/draft-birrane-dtn-ama-07>
- (2) A Data Model - <https://tools.ietf.org/html/draft-birrane-dtn-adm-03>
- (3) A Protocol - <https://tools.ietf.org/html/draft-birrane-dtn-amp-05>

Work is ongoing in the DTN-WG

Work is occurring in the Delay-Tolerant Networking WG (DTN-WG)
Thursday Afternoon, Session 1, 13:30-15:30, Notre Dame

