

Information Model for LMAP

draft-ietf-lmap-information-model-00

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Motivation

- Overall Purpose
 - Guide standardisation of one or more control and reporting protocols
 - Enable high-level interoperability between protocols
 - Clarify MA information and functionality
- Structure
 - Assist protocols in breaking information down into separate messages that can be delivered at different times over different protocols
 - Aid readability

Information Model Sections

Pre-Configuration

Minimal set of information necessary for an MA to securely contact an initial Controller

Configuration

Information configured by the Controller pertaining to Controller communication or general MA settings such as MA and Group ID

Instruction

Configuration by the Controller of what Measurement Tasks to perform, when to perform them, and where/when to report the results

MA to Controller

Information transmitted back to the Controller with configuration or instruction errors and general failure notices

Capability & Status

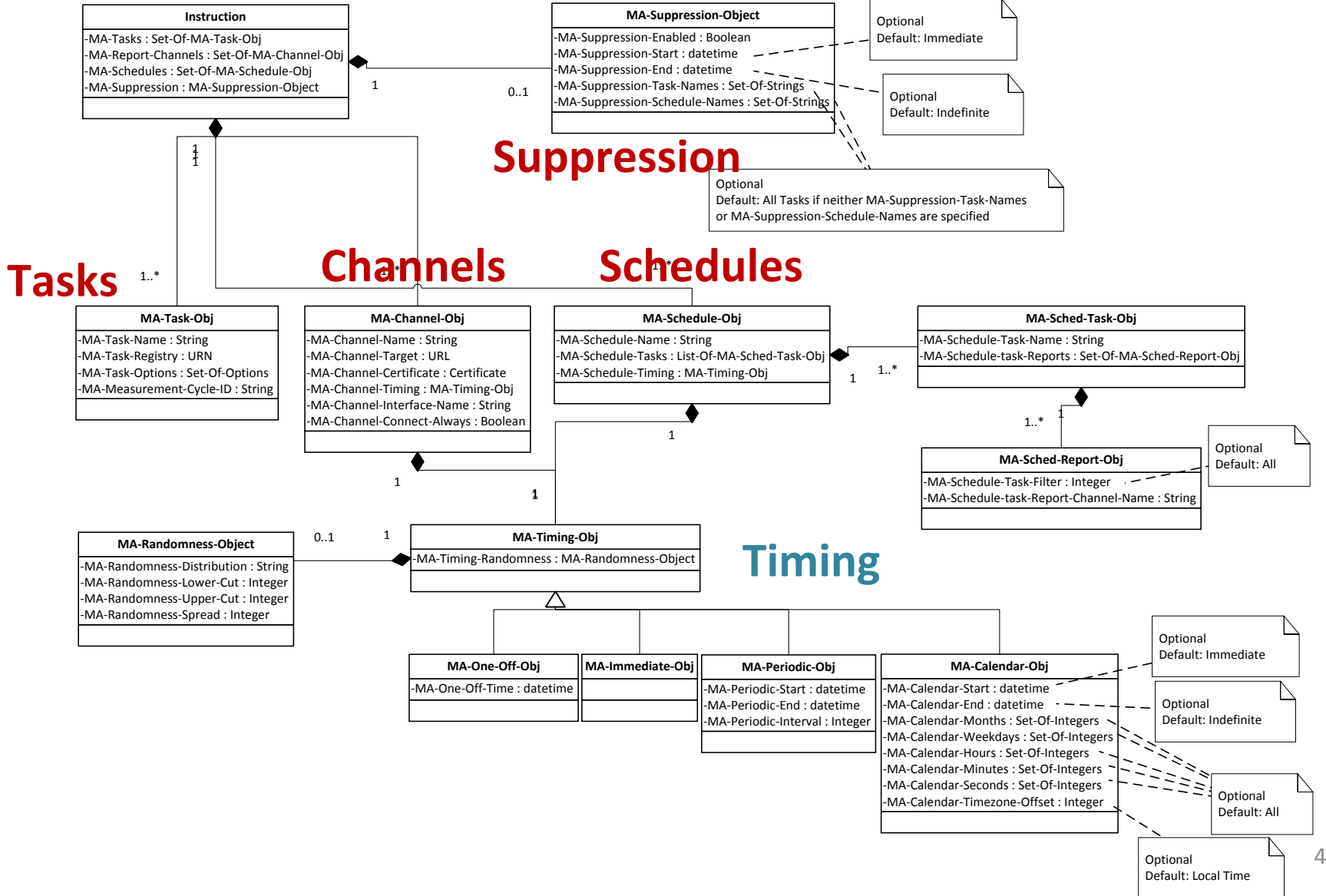
Information available to be fetched by the Controller such as the Measurement Tasks supported by the MA or interface configuration

Reporting

Information sent to the Collector regarding the Measurement Task results including MA context and Task Configuration

Instruction Information

Instruction



General Updates

- Various small corrections to typing, language and terminology
- More explanation of motivation and information split
- More examples of logging type information
- Notation changed to pseudo object-based programming

Functional Changes

1. Use of Device Identifier (+ URN) instead of MAC
2. Interface option added to Report Channel (previously only for Measurement Task Configuration)
 - Allows reporting over GPRS or other channel, particularly for “failed connection” type results
3. Calendar-based Timing: Hours now has a UTC offset and allows local timezone for consistent user condition measurement (e.g. peak time)
4. Logging is now specified as just another Measurement Task – using standard Measurement Schedule and Report Channel

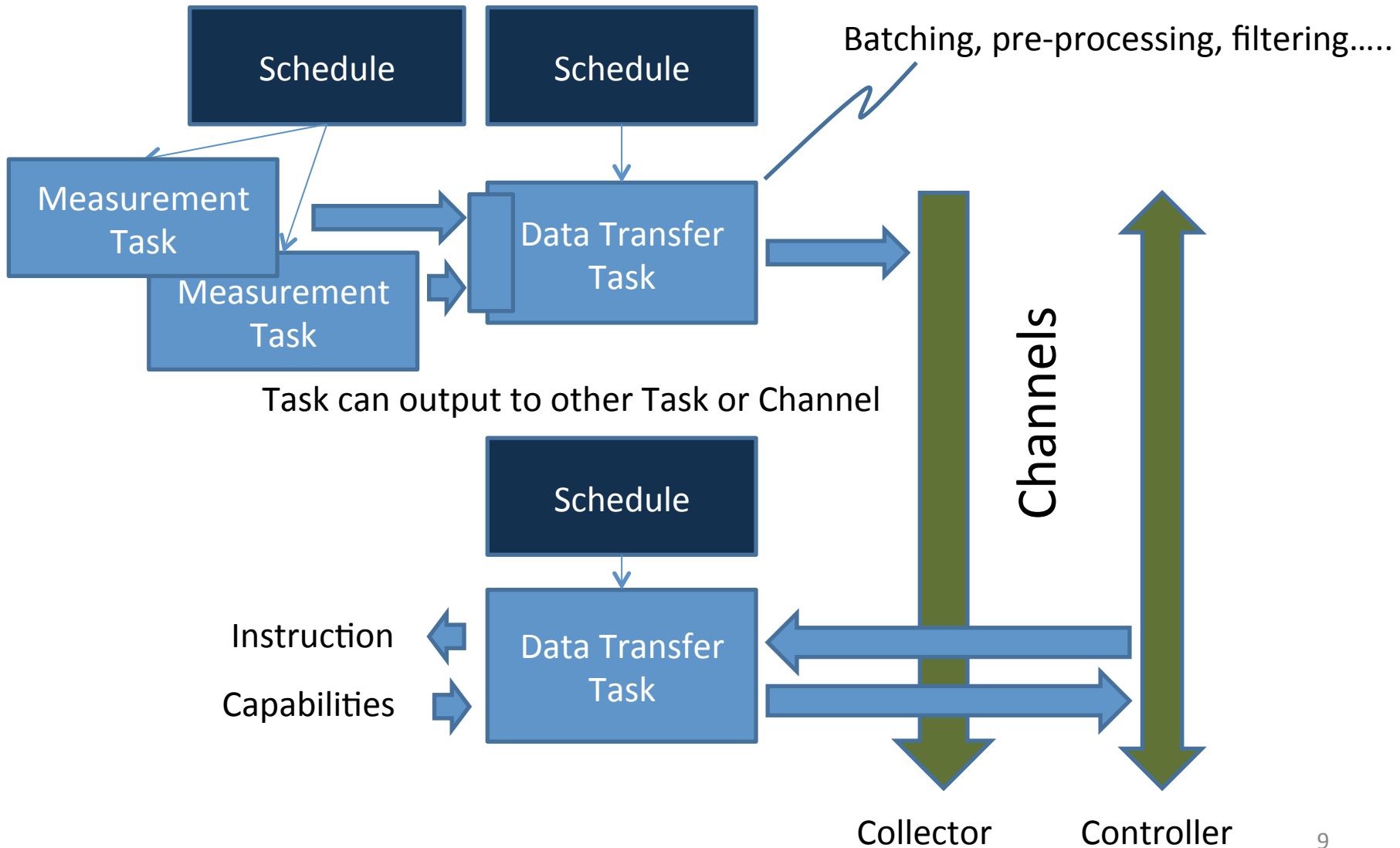
Functional Changes

5. Accommodates Measurement Task multiple outputs
 - Each Measurement Task now has a set of Report Channels to itself rather than shared within the Schedule
6. New Configuration parameter to suppress measurement on X failed attempts to contact Controller
7. New Report Channel parameter to send (or not) null reports
8. Suppression capability extended:
 - Added Set of Schedules to suppress (in addition to Set of Measurement Task Configurations)
 - Schedules could be used to split high/low priority etc. if desired or to stop peak-time measurements
 - Added Boolean on/off (simpler than uploading Suppression with time in the past etc.)

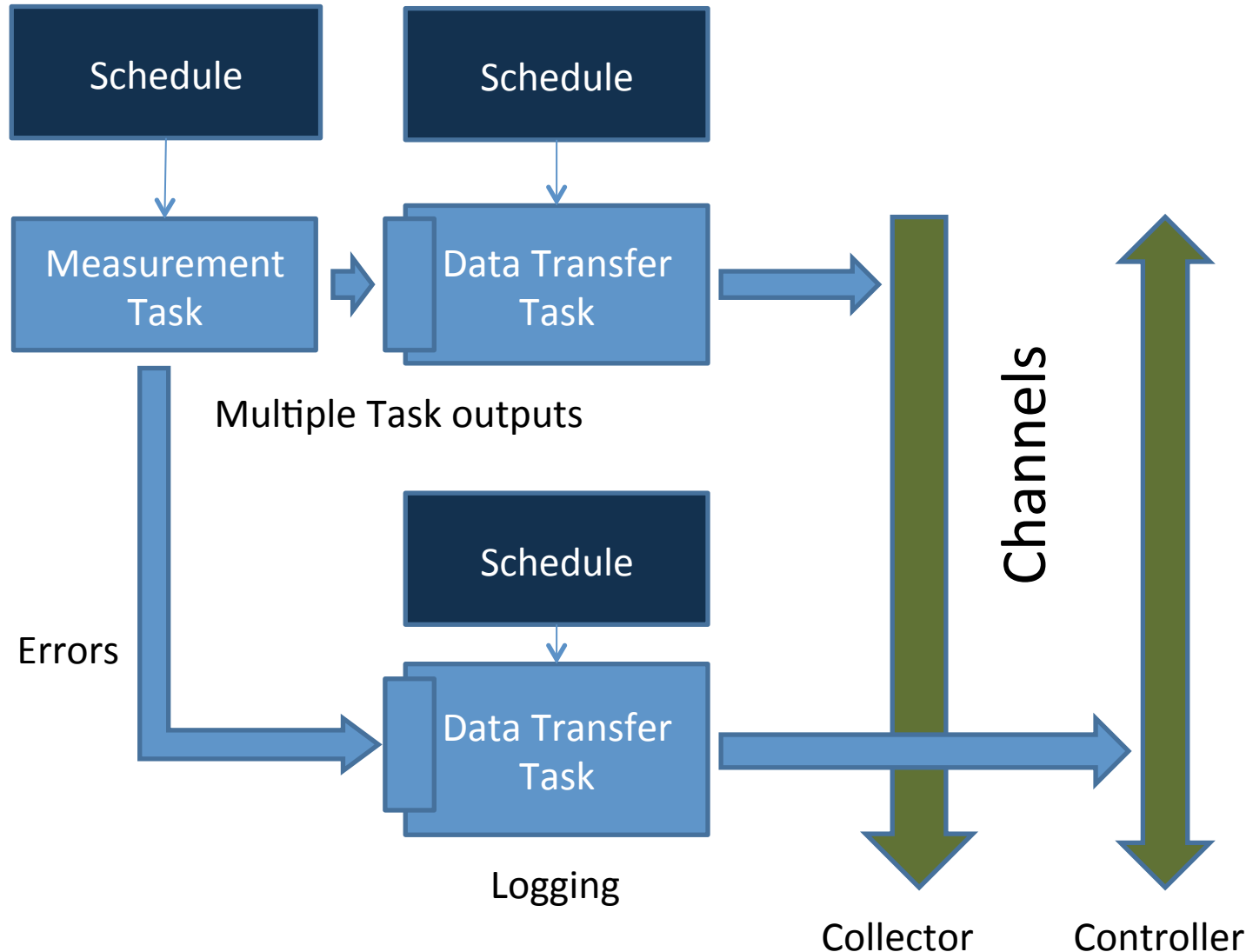
Proposed Changes

- **Report** context block to be removed
 - Context is reported by Measurement Tasks (can have dedicated Task)
- **Suppression** to enable stopping of currently executing Tasks
 - Additional Boolean “Stop-Current-Tasks”
- **Channel** to no longer have Timing
 - Timing to be attached to scheduled data transfer Tasks
 - enables multiple data/timings over the same channel
 - Everything scheduled in MA becomes a Task

New Task & Channel Model Example



New Task & Channel Model Example



Further Discussions

- Interfaces to have defined general types
 - E.g. Wi-Fi, Active WAN, LAN, GPRS, Wireless
- Task collision column in report to enable detection/elimination of potentially conflicting Tasks