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Experiences of working with MODAF along side other standards (BPMN and MODAF)

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Working with architectures, a few important tips

- Define the purpose and scope of the architecture
- Agree on the context
- Don't do more than you need to
- Make sure you answer the questions that you were asked
- Someone must be responsible for the resulting architectural description

Some more important tips

- Start in time, the architectural work should be a driver for the development
- The architectural work is a part of the process not something to be done separately from other things
- Get a good tool, but after you decided what to do
- Reserve time to create good adapted presentations of the architecture description. If no one can understand it, then it is of no use
- Be open to alternative solutions. It is not always the most advanced technical solution which is the best.

Business Process Modeling Notation (BPMN)

- Adopted as an OMG standard
- Widely accepted among BPM edge corporations
- Simple and easily understood notation
- Important in identifying services

BPMN

Essential features

- Pools and lanes provide means to take organizational responsibility into consideration for the control of flow
- Events (throwing and catching)
 - provide support for multithreading with synchronization
 - simple to understand and use for parallel processing
- Ad-hoc processes

BPMN – Language elements

Flow Objects

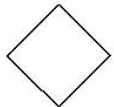
Events



Activities

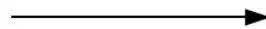


Gateways



Connectors

Sequence Flow



Message Flow



Association



Artifacts

Data Object



Name
[State]

Text Annotation



Group



Swimlanes

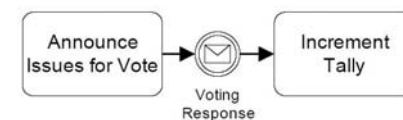
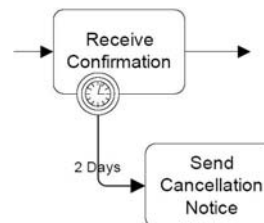
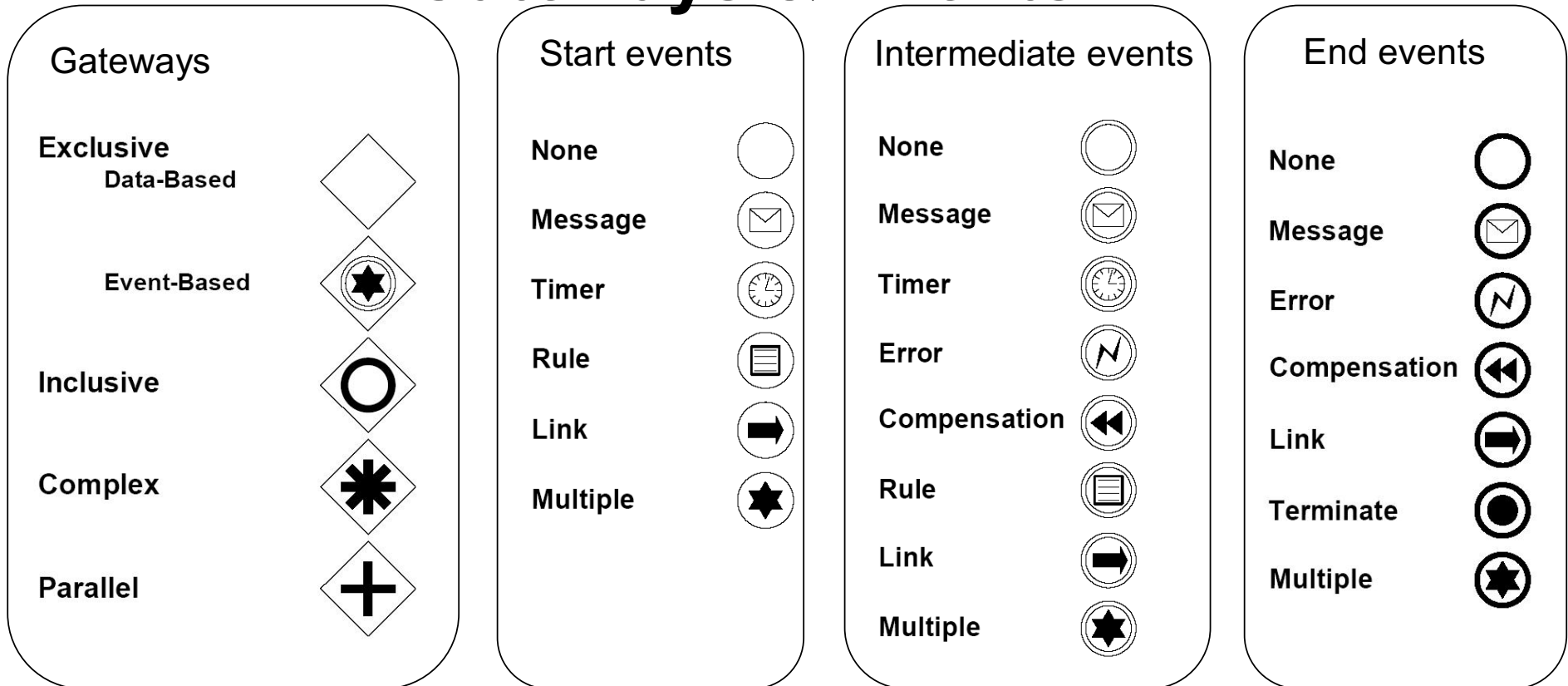
Pool



Lanes (within a Pool)

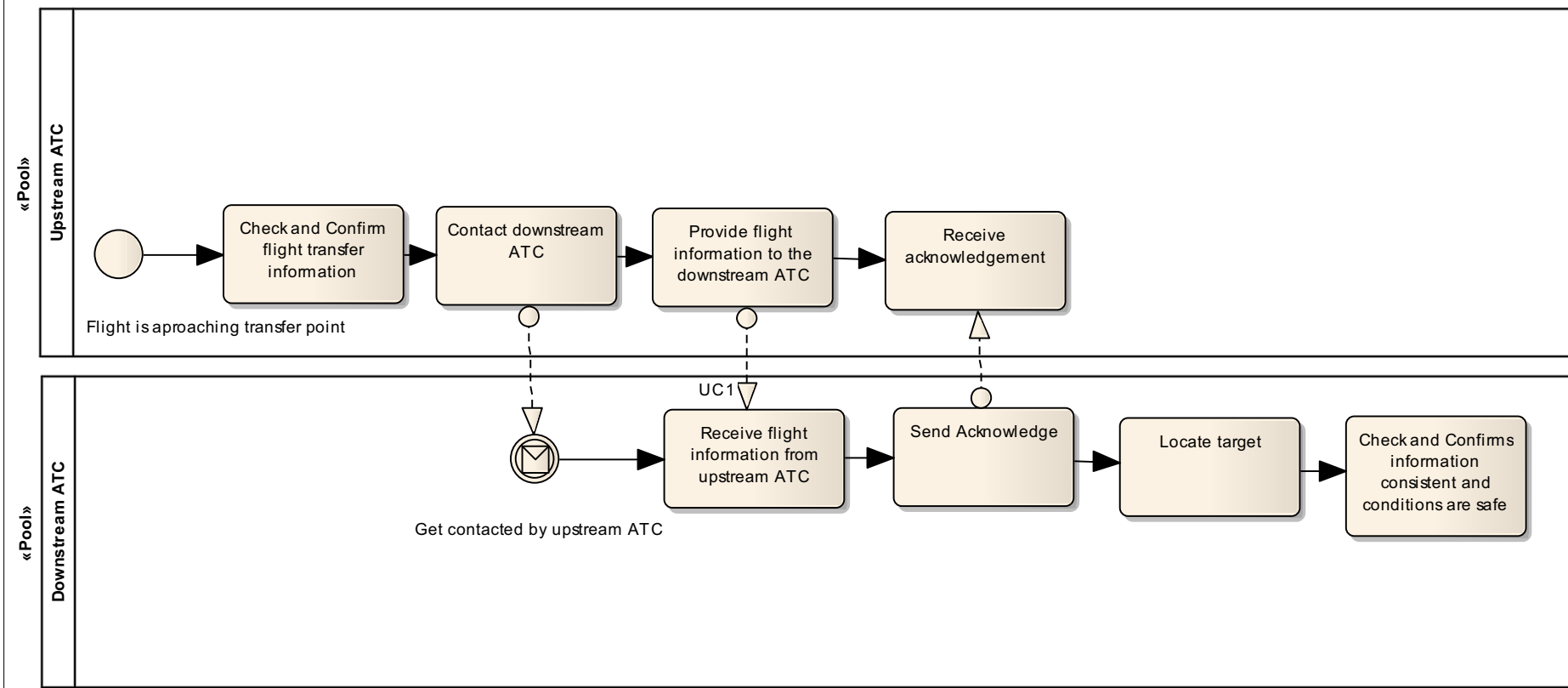


BPMN - Gateways & Events



An example



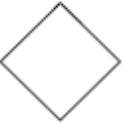
BPMN Modified - Randall 071119 Transfer of responsibility for Control of a Flight





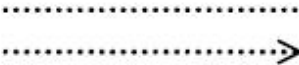
BPMN – MODAF

- Will mainly be captured in OV-5
- Business rules are captured in OV-6a
- Main business process are equivalent to Standard Operational Activity



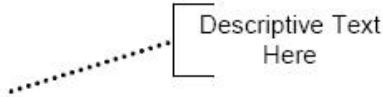
Connecting M3 – BPMN (Flow Objects)

Symbol	BPMN	MODAF
	Activity	Operational Activity
	Event	No equivalent, use UML Event (Send Signal Action, Accept Event Action)
	Gateway	No equivalent, use UML Choice


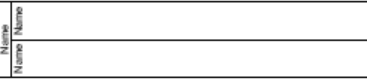
Connecting M3 – BPMN (Connectors)

Symbol	BPMN	MODAF
	Sequence Flow	Operational Activity Flow
	Message Flow	Operational Activity Flow (the message can be captured by an Information Element)
	Association	No equivalent, use UML Association

Connecting M3 – BPMN (Artefacts)

Symbol	BPMN	MODAF
	Data Object	If associated with a sequence flow it corresponds to Information Element. Otherwise use UML Comment
	Group	Problem Domain
	Text Annotation	No equivalent, use UML Comment

Connecting M3 – BPMN (Swimlanes)

Symbol	BPMN	MODAF
	Pool	Node (Operational Swimlane) Use the parent node as a Pool and the children nodes as Swimlanes
	Lane	Node (Operational Swimlane) Use the parent node as a Pool and the children nodes as Swimlanes

Connecting M3 – BPMN (Special forms of Gateways and Events)

For handling the different forms of Gateways and Events it is suggested to use Tagged Value attribute connected to the UML object (that is Event for Events and Choice for Gateways) as neither of these have M3 equivalents.

Unified Profile for DoDAF and MODAF (UPDM) 2.0

- UPDM is:
 - Meta-model
 - UML profile
 - An attempt to unify the architectural frameworks in the military domain
- Version 2.0 is planned to be fully BPMN compatible
- BPMN are working on a meta-model in the form of a UML-profile



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