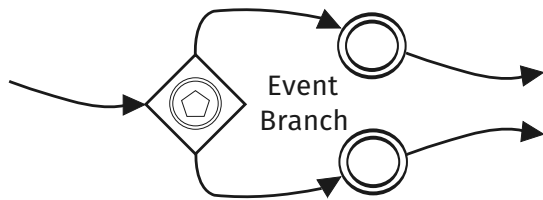


# Business Process Modeling, Management and Mining

## Business Process Model and Notation

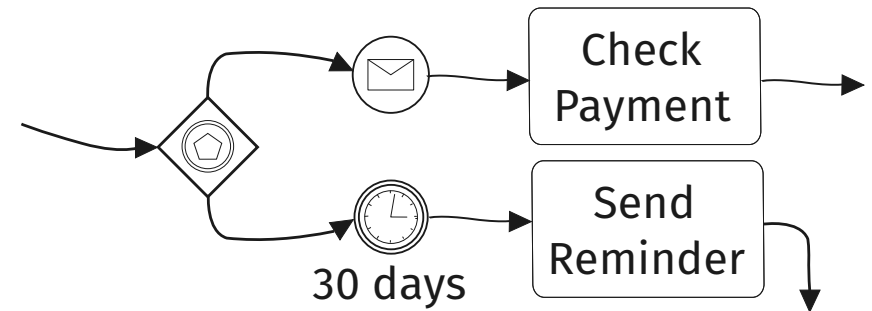
Prof. Cesare Pautasso  
<http://www.pautasso.info>  
 cesare.pautasso@usi.ch  
 @pautasso

### Event Gateway



Branch the control flow depending on which intermediate event happens first

### Event Gateway Example

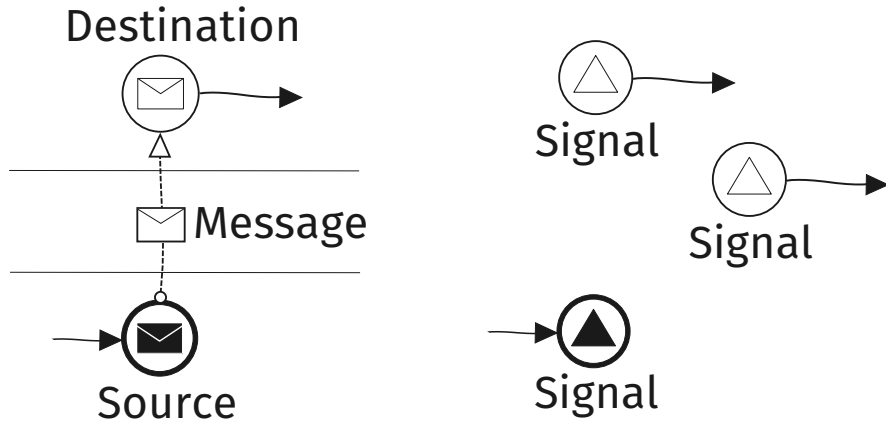


Wait to receive a payment for up to 30 days. If the payment is late, send a reminder

### Events

	Start	Intermediate	End	
	○	○	○	
Message	✉	✉	✉	
Signal	△	△	△	
Timer	🕒	🕒		
Escalate			⬆	⬆
Link		↩	➔	
			●	Terminate
			⚡	Error
	Catch		Throw	

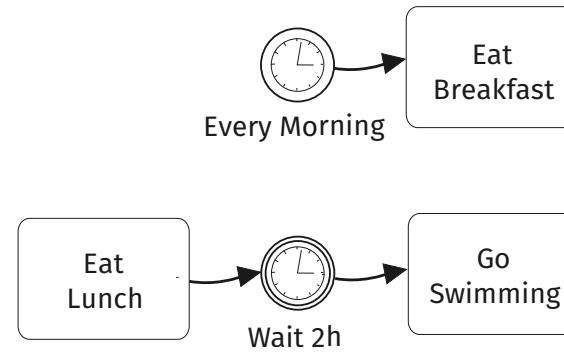
### Messages vs. Signals



Messages are exchanged between one source and one destination

Signals are broadcast to all interested parties (publish/subscribe)

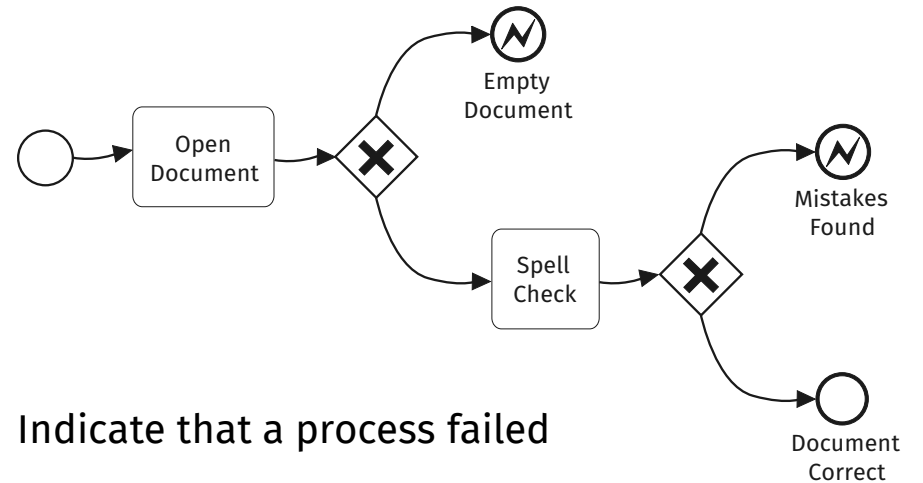
### Timer Events



Instantiate a process periodically

Delay Control Flow for some time

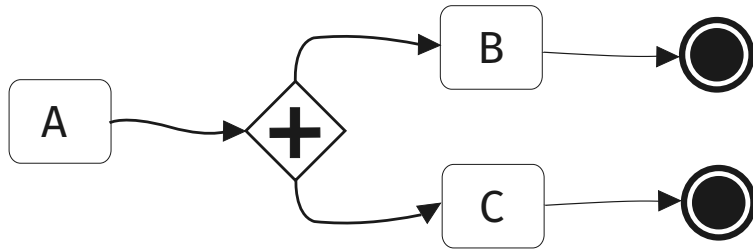
### Error Events



Indicate that a process failed

### Terminate Events

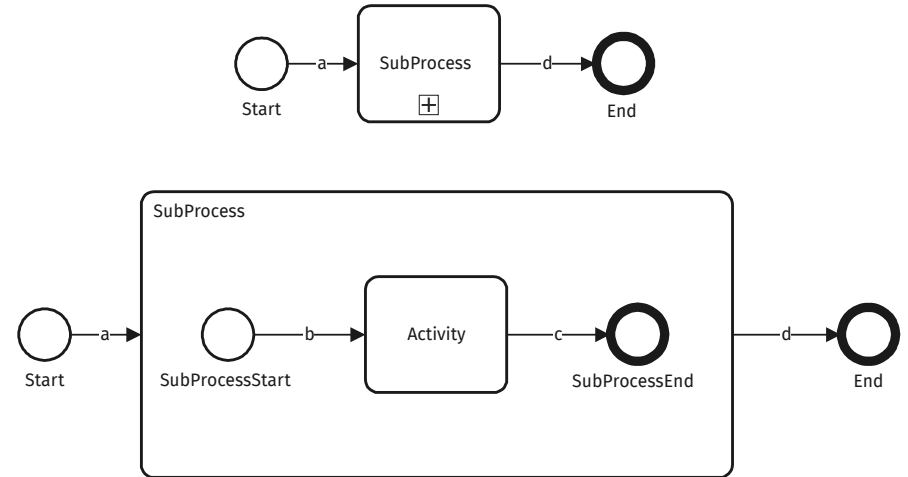
Immediately stop the execution of all activities of the process



Example: Race B against C and terminate the process when the first completes

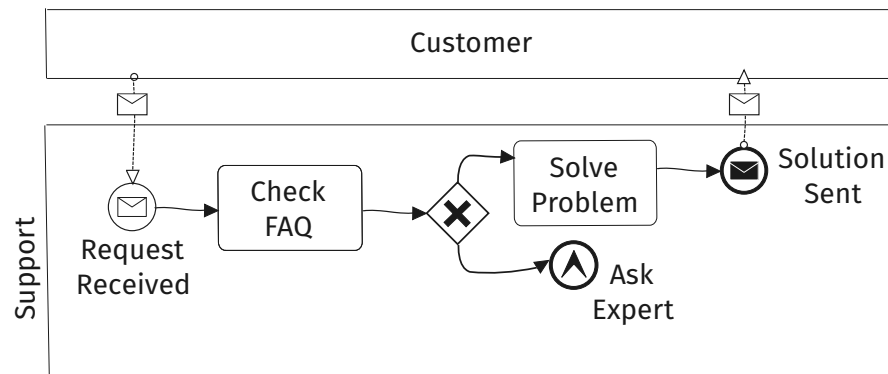
### Sub Process

Progressive refinement, abstraction of details



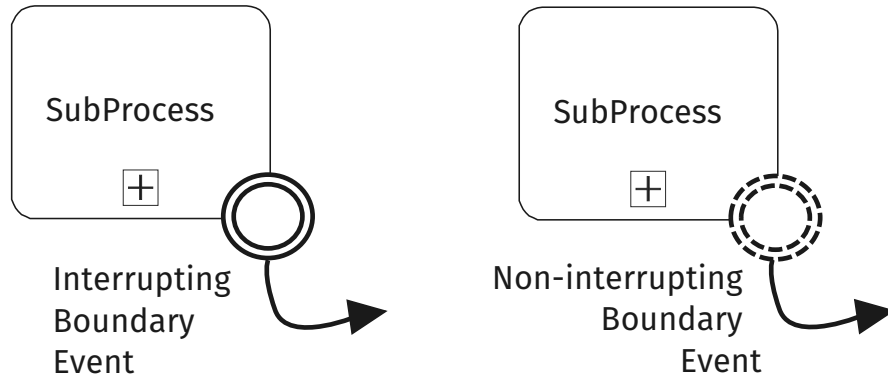
### Escalation Events

Delegate to a higher level of authority



### Boundary Events

React to internal events happening during the SubProcess execution



Boundary ⇒ Intermediate and Catching

#### Interrupting

Stop the execution of all activities within the subprocess (default)

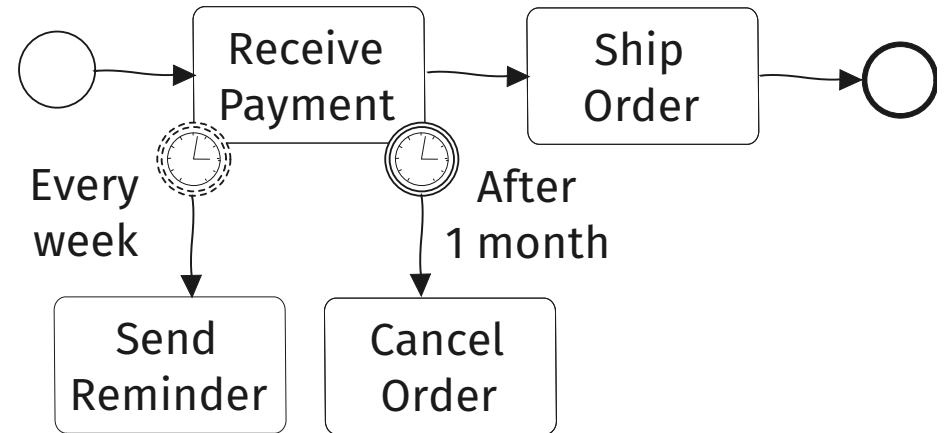
Control flow continues outside the subprocess

#### Non-Interrupting

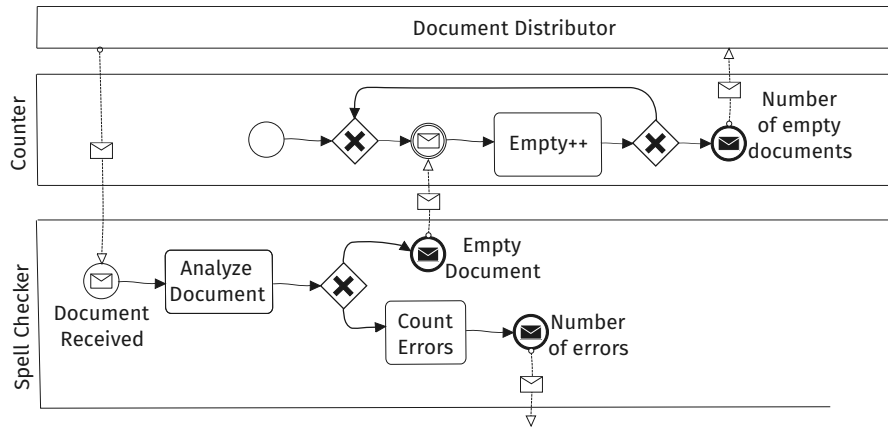
Continue the execution of any activities within the subprocess

Control flow continues both inside and outside the subprocess

### Time Boundary Events



## Messaging Events



## Boundary Events

