# Process Logic and Diagramming Standards

The following examples use Casewise default notation, but the principles are the same for if you use BPMN (or any hybrid version of it). The main issue it seems to me is the purpose of these diagrams, viz: are they aimed at a business audience or are they to be used as system specifications?

## Illustrations

Are Figure 1 and Figure 2 the same? In the first one, I'd say 2 and 3 happen in parallel, but in the second, you cannot actually be sure when 2 and 3 are supposed to happen. For a business user, does it matter (it might for a software specification where logic is paramount)?

Note, you can also annotate connectors, which can make the flow\handover more specific (see Figure 4).

Figure 1

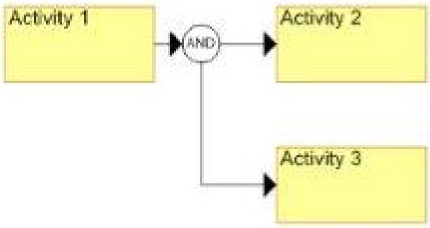
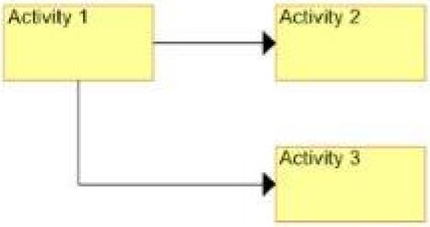
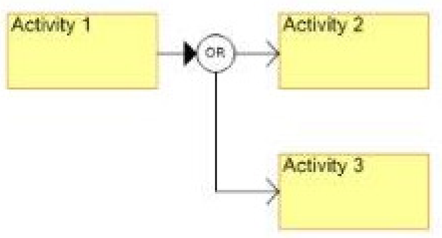


Figure 2



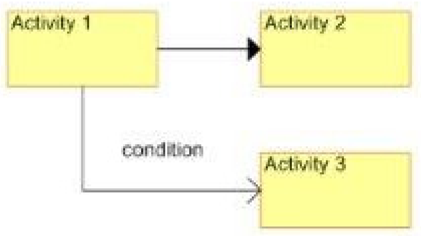
Using "Gateways" (*Connector Sets* in Casewise) can avoid ambiguity. Figure 3 explicitly says it is an OR gateway:

**Figure 3**



But for a business user, maybe this would suffice:

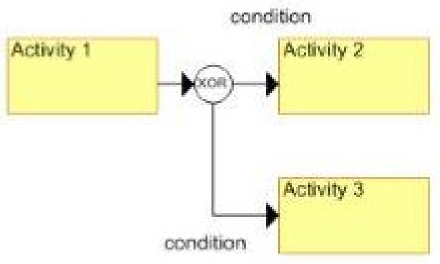
**Figure 4**



Note that in the above example, I have used an "open" arrowhead, which usually denotes "optionality". However, again, by introducing additional notational conventions, you add a cognitive overhead for the end user and a consistency overhead for the modelers. It might, therefore, be better to stick with solid arrowheads at all times.

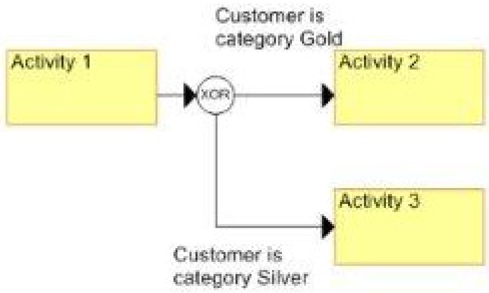
For Exclusive OR (XOR) pathways, however, I would use a "Gateway" object like this:

**Figure 5**



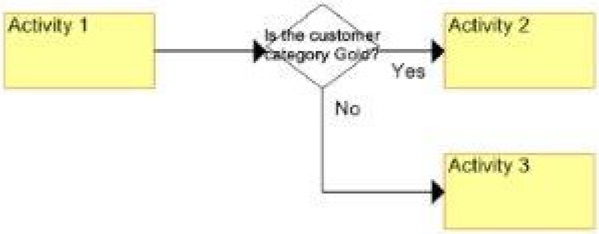
For example:

**Figure 6**



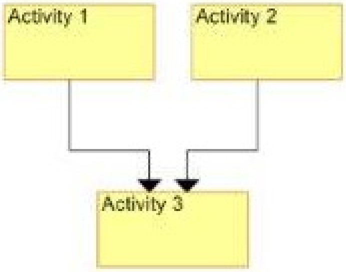
But you could also move away from BPMN and use a standard flow chart notation, which is often more business-friendly:

**Figure 7**



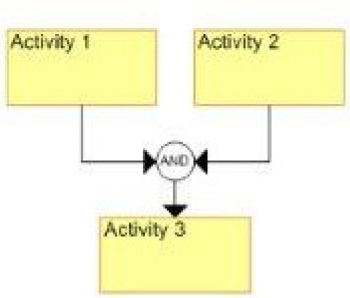
Input connectors can also be ambiguous:

**Figure 8**



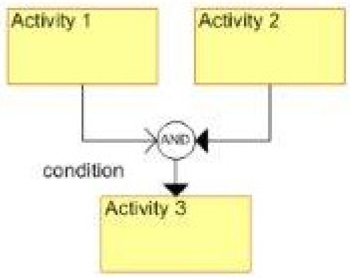
In this example, "Activity 3" logically happens twice - once after each input connector. If you want to indicate that both upstream processes must be complete before Activity 3 starts, then this is the notation we use in Casewise:

Figure 9



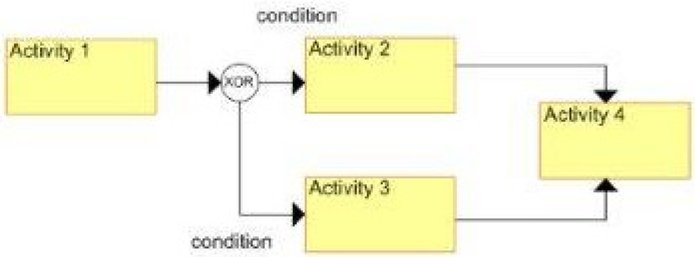
I would avoid getting bogged down in too much accuracy. What are we to make of this use of an optional input (I'm not sure I even understand what it is saying)?

Figure 10



Input AND sets as they are known in Casewise notation are not required, however, after an upstream XOR Set; this is because 4 will only ever have ***either*** 2 or 3 as its upstream process step .

Figure 11



BPMN, however, does have a gateway before 4, which, for me, complicates the matter:

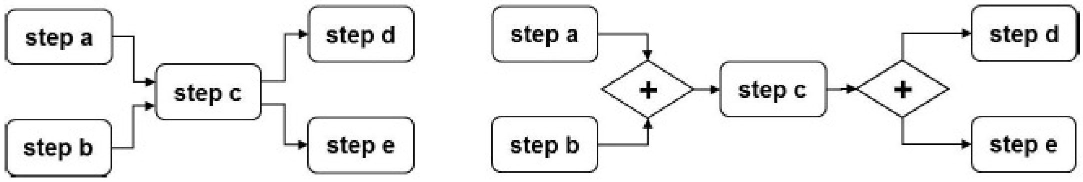


Figure 2: Alternatives for showing parallel ("AND") flows

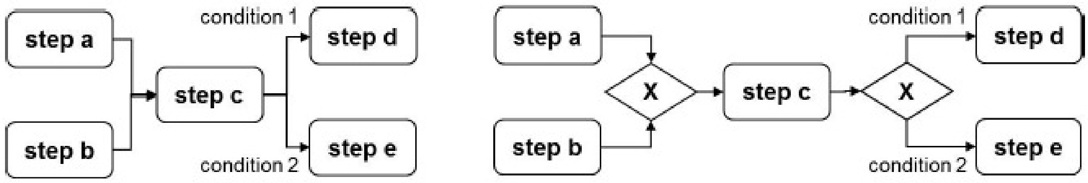


**Figure 3: Alternatives for showing mutually exclusive ("XOR") flows**

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