

Business Process Management: Concepts, Languages, Architectures

Second Edition

Figures of Chapter 6

Mathias Weske

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Mathias Weske

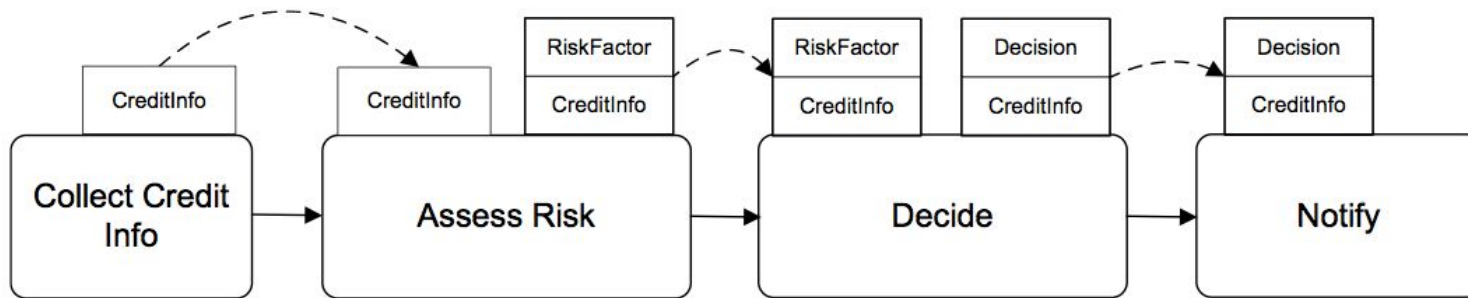


Fig. 6.1. Data dependencies imply activity orderings

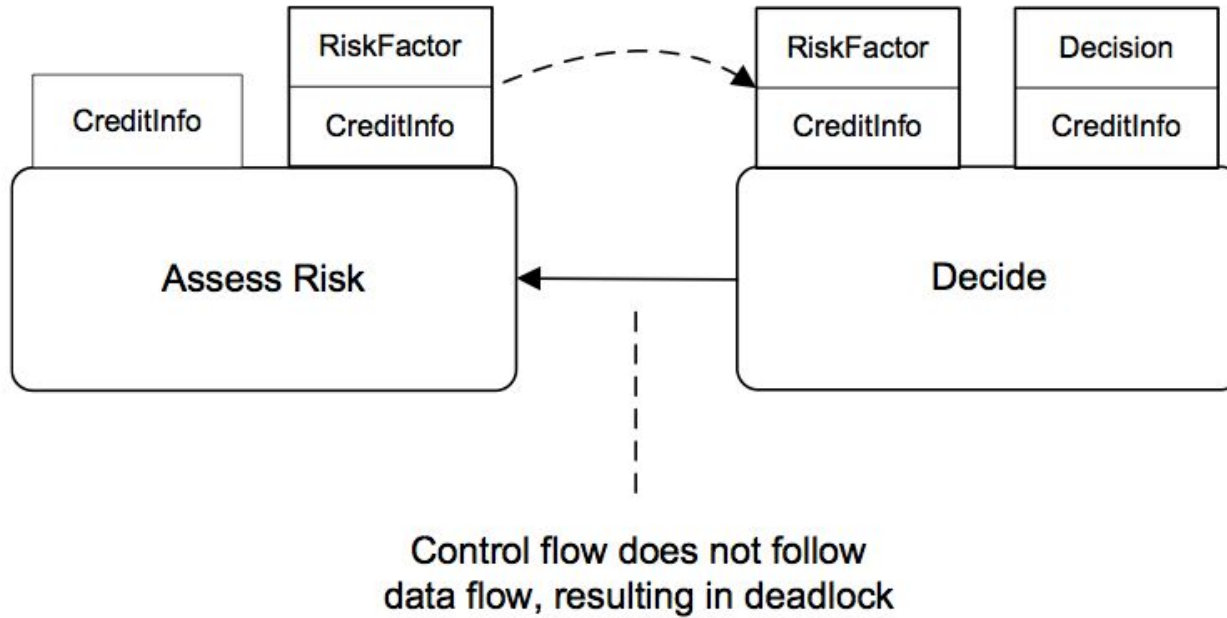


Fig. 6.2. Data flow violated by control flow, resulting in deadlock

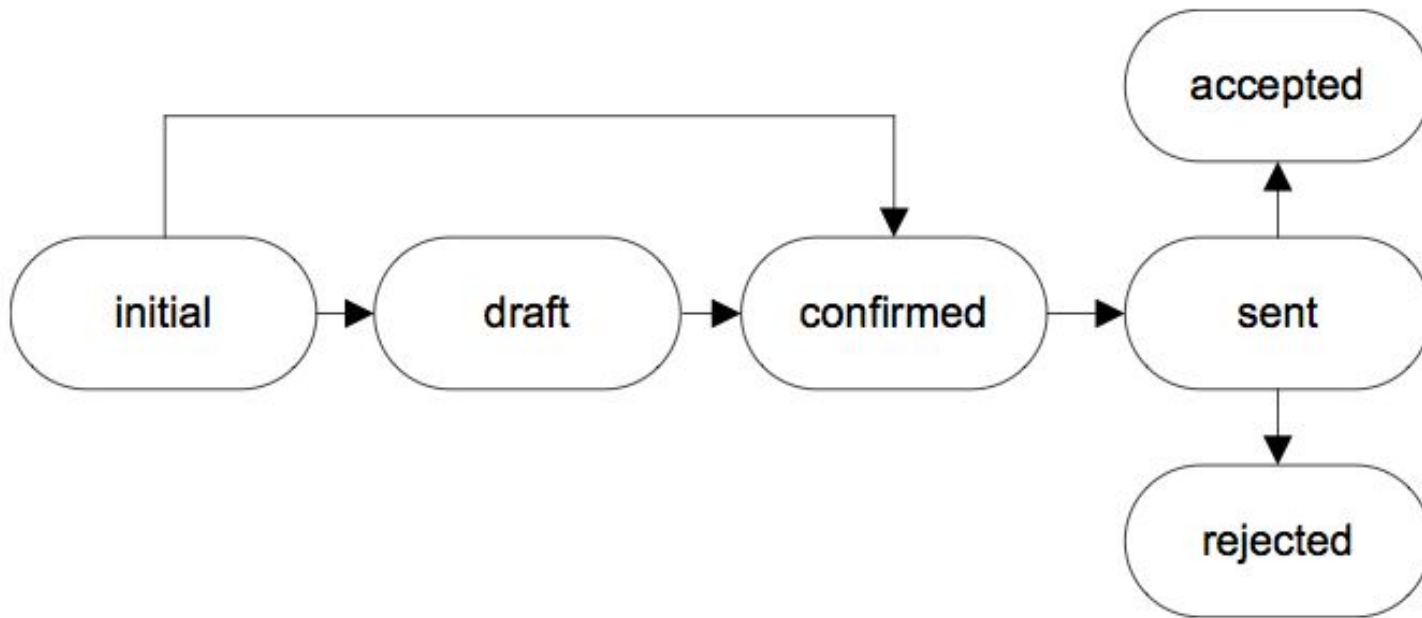


Fig. 6.3. Object lifecycle of quote object

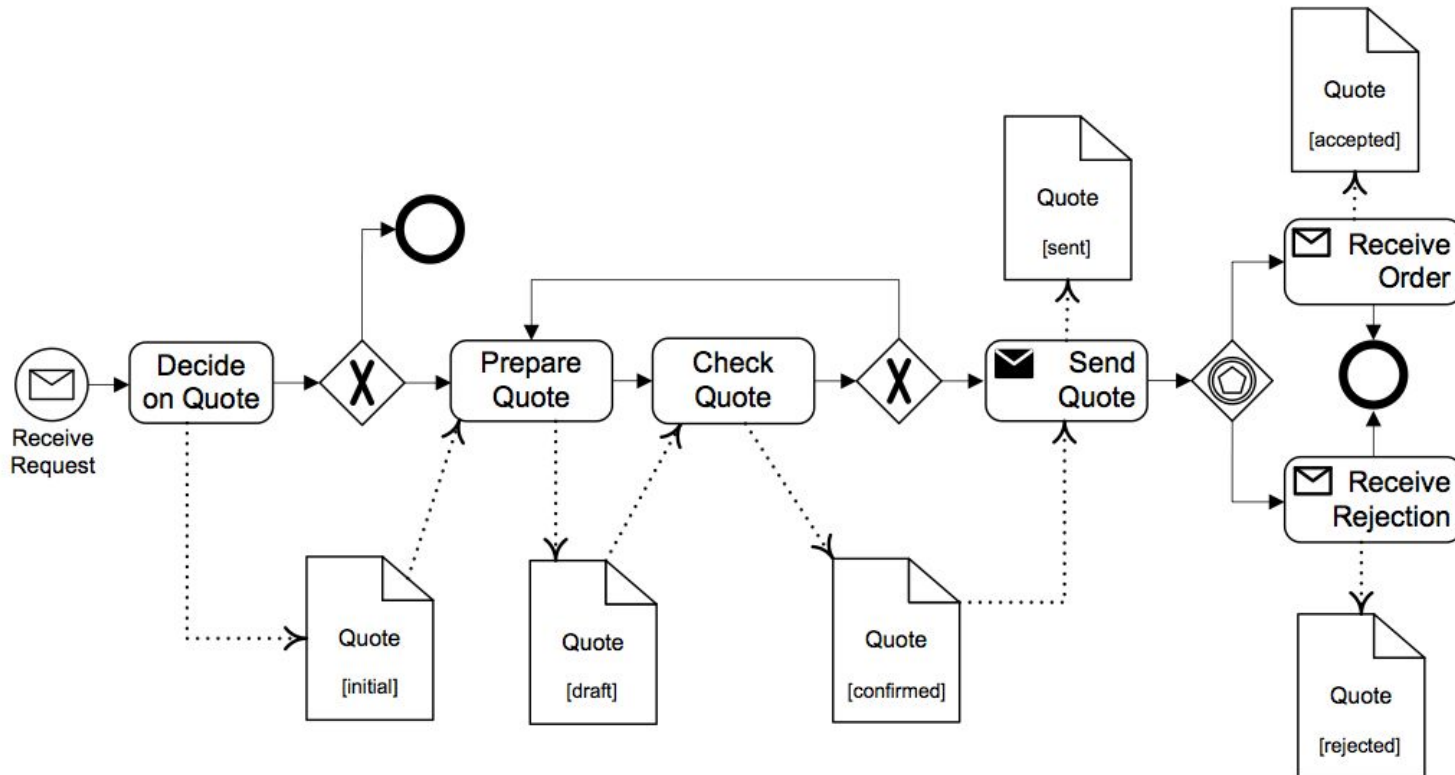
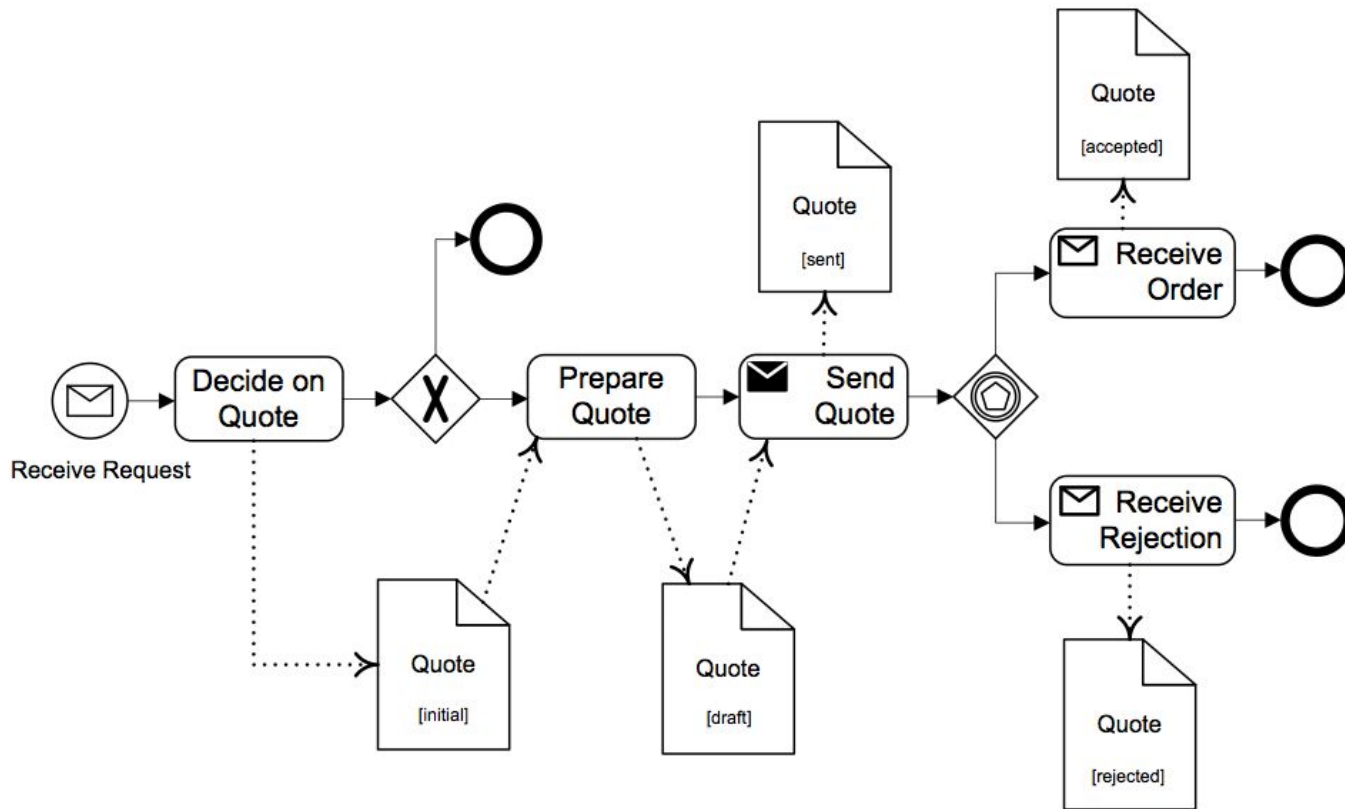


Fig. 6.4. Business process operating on a quote data object



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Fig. 6.5. Business process that does not conform to the quote object's lifecycle

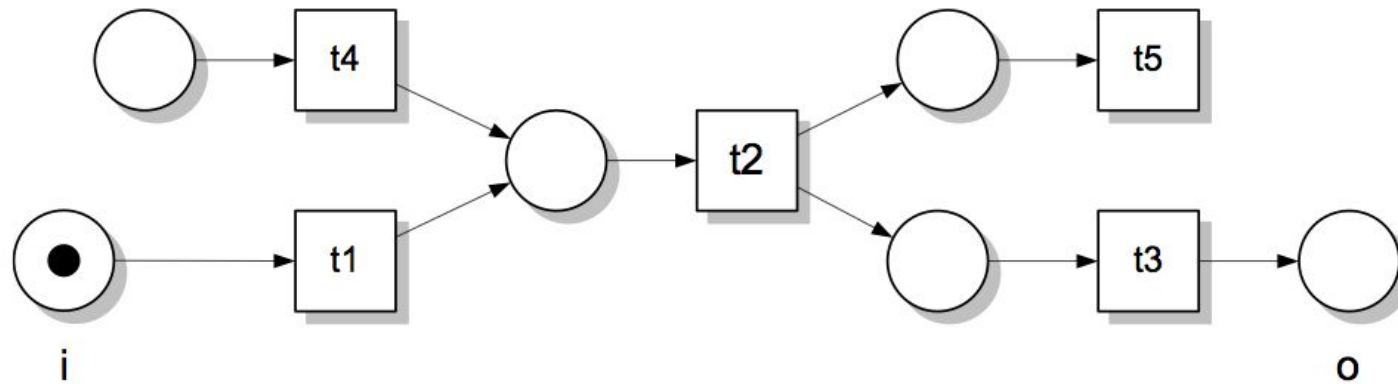


Fig. 6.6. Petri net with dangling places and dangling transitions

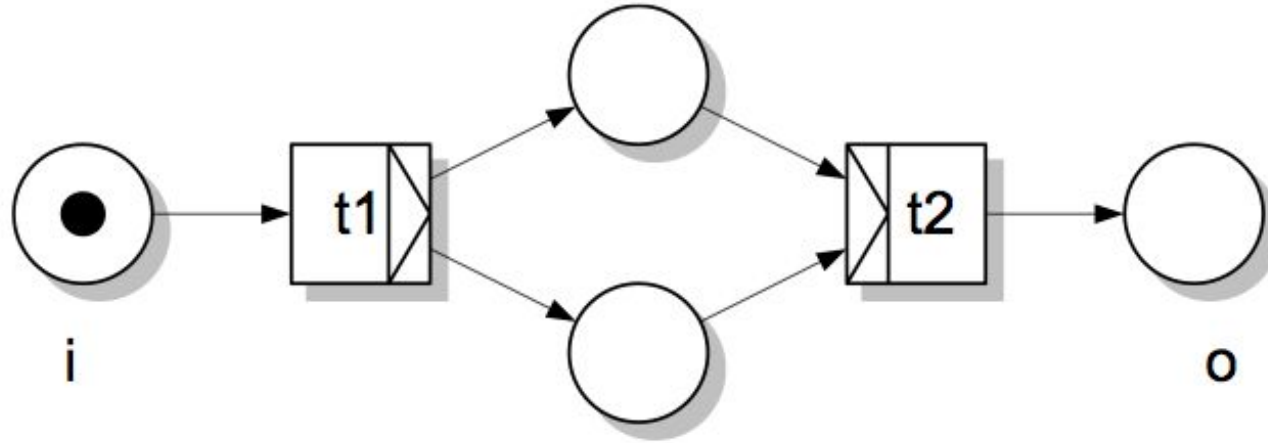


Fig. 6.7. Workflow net with deadlock

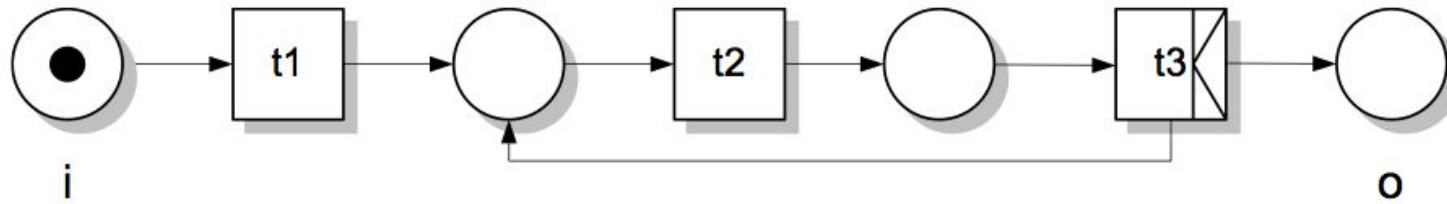


Fig. 6.8. Workflow net with livelock

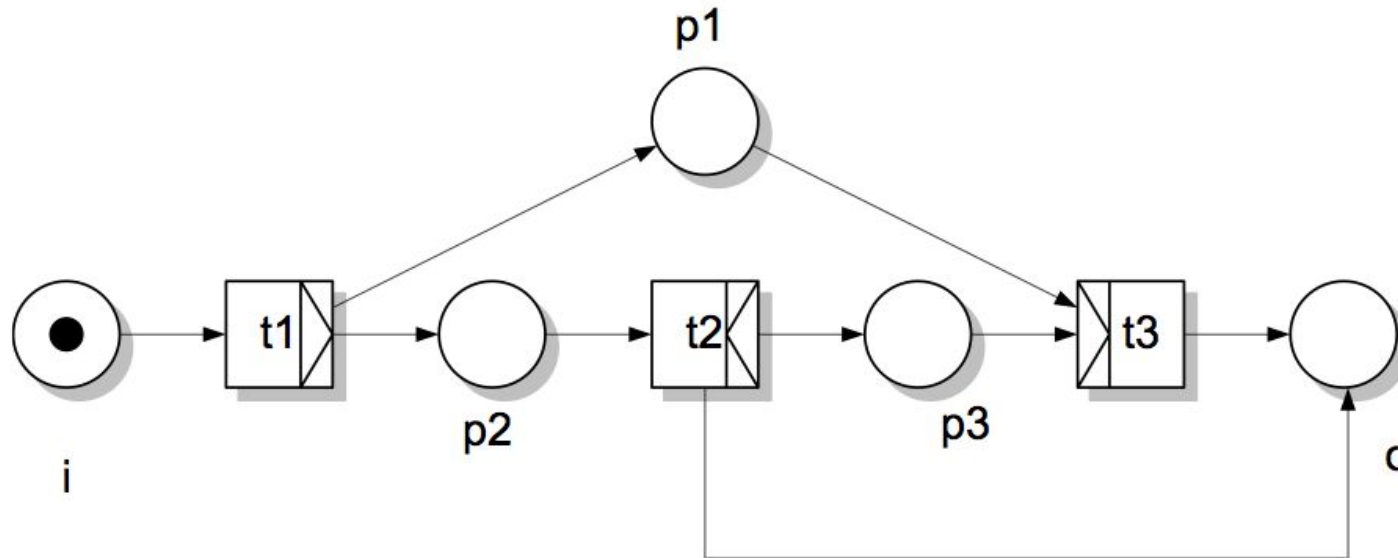


Fig. 6.9. Workflow net with deadlock/remaining tokens

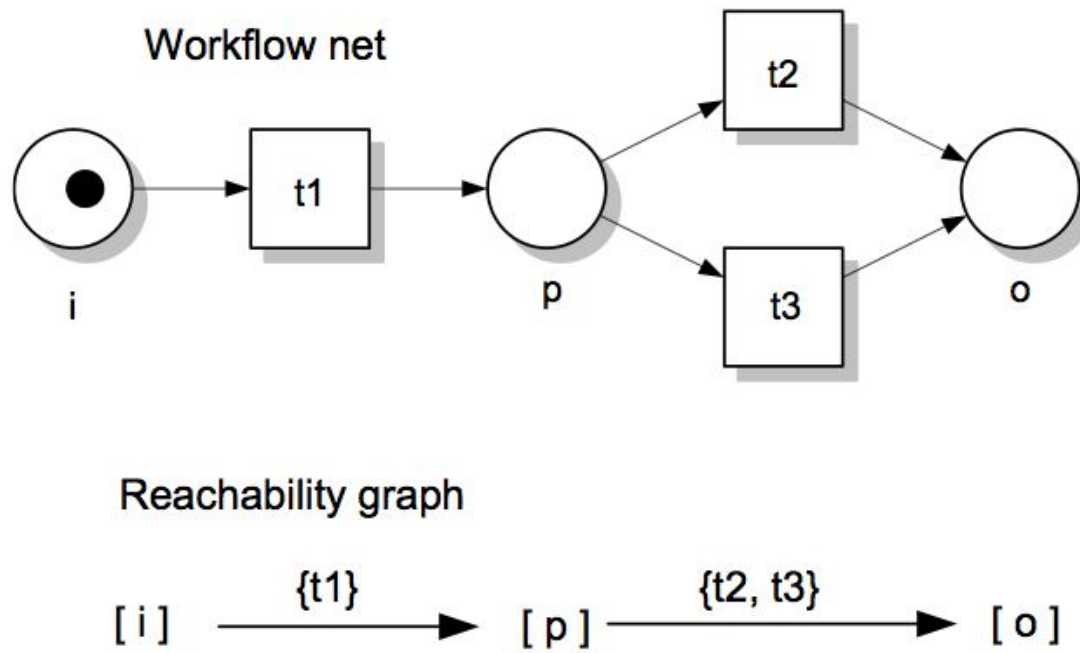


Fig. 6.10. Workflow net and corresponding reachability graph

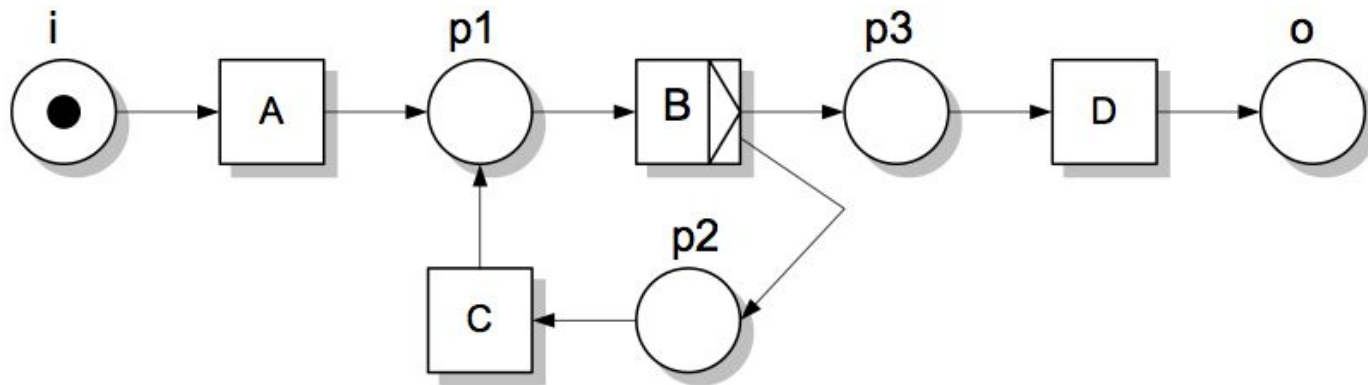


Fig. 6.11. Workflow net with loop

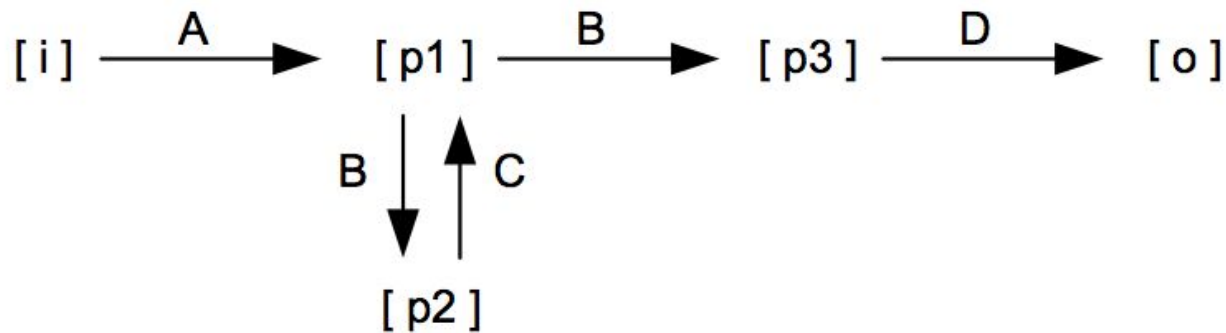
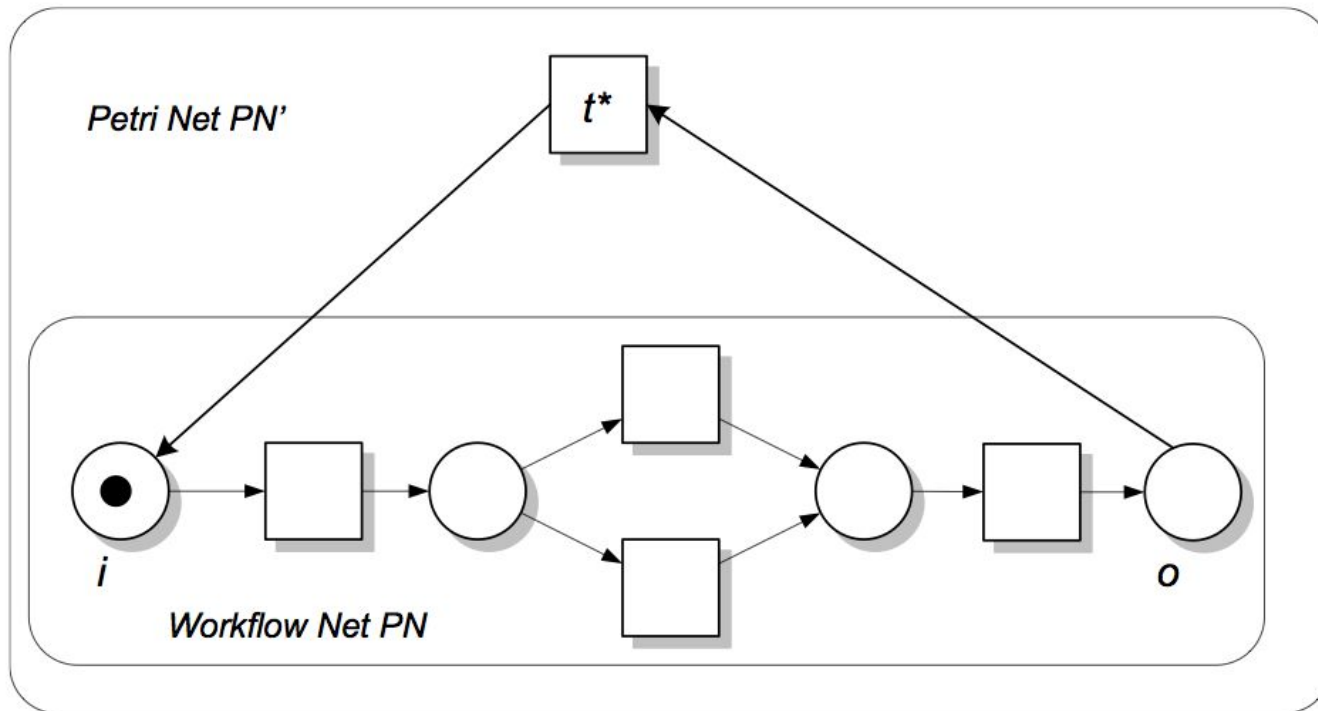


Fig. 6.12. Reachability graph of workflow net shown in Figure 6.11



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Fig. 6.13. Workflow net PN and Petri net PN' , illustrating soundness theorem

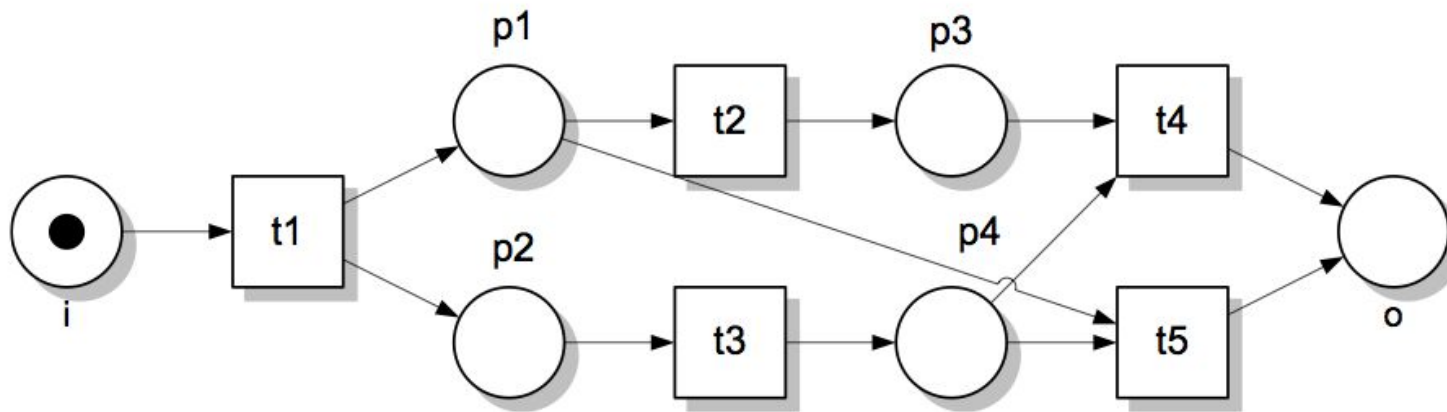


Fig. 6.14. Non-free-choice workflow net

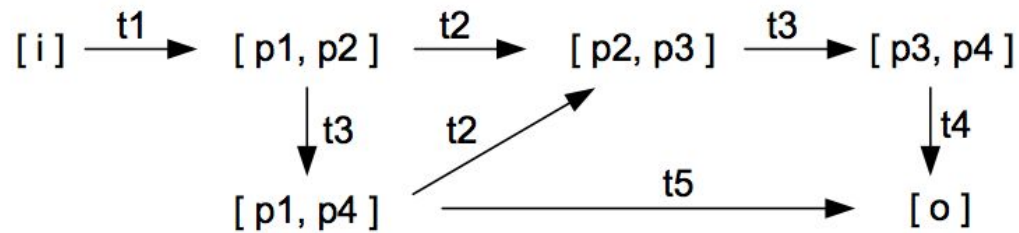
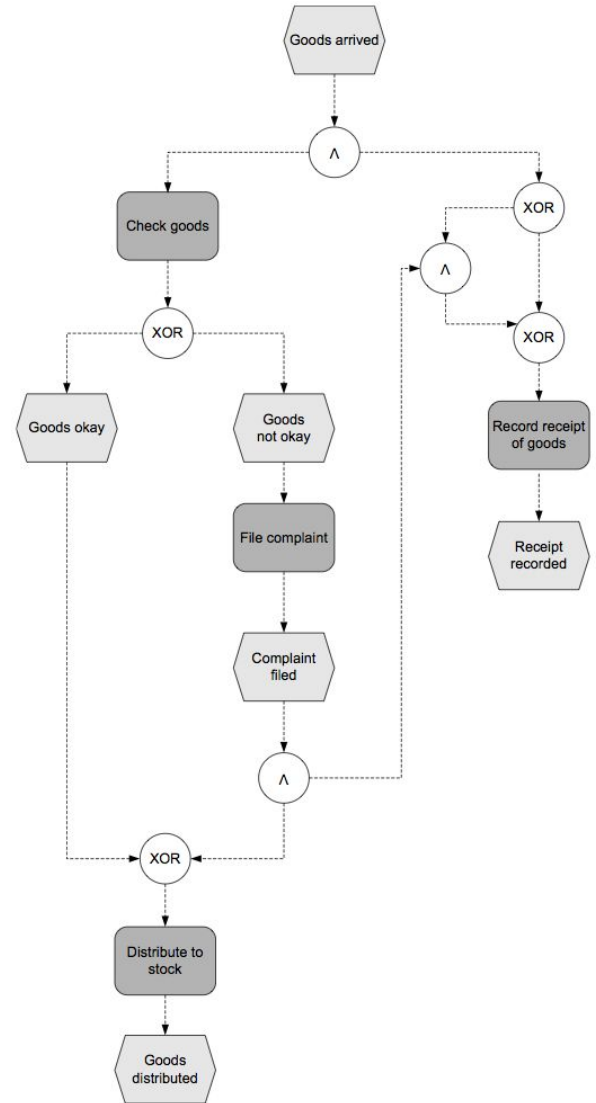


Fig. 6.15. Reachability graph of non-free-choice workflow net in Figure 6.14, showing its soundness



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Fig. 6.16. Typical example of an event-driven process chain

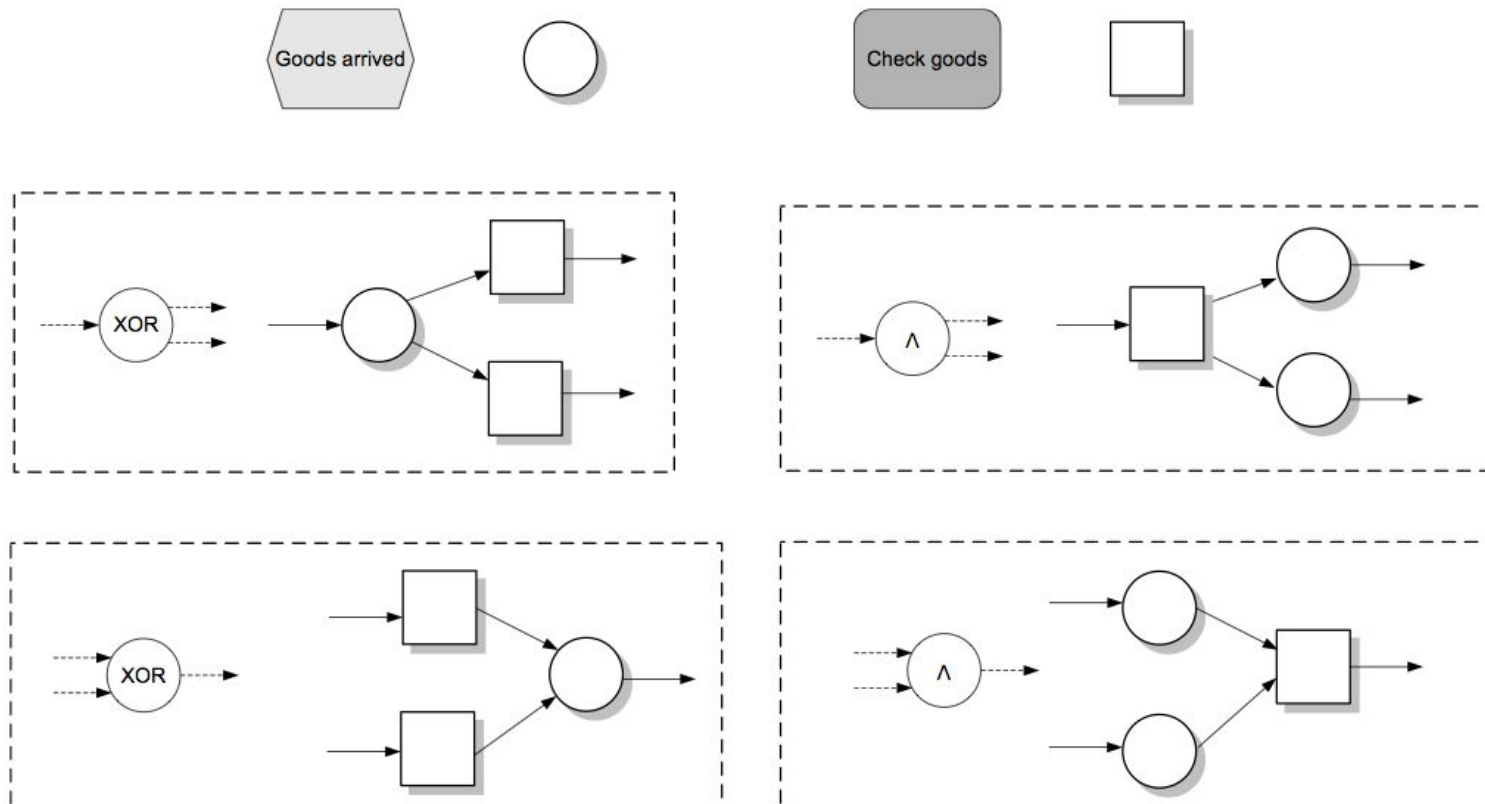


Fig. 6.17. Translation of event-driven process chain into a Petri net

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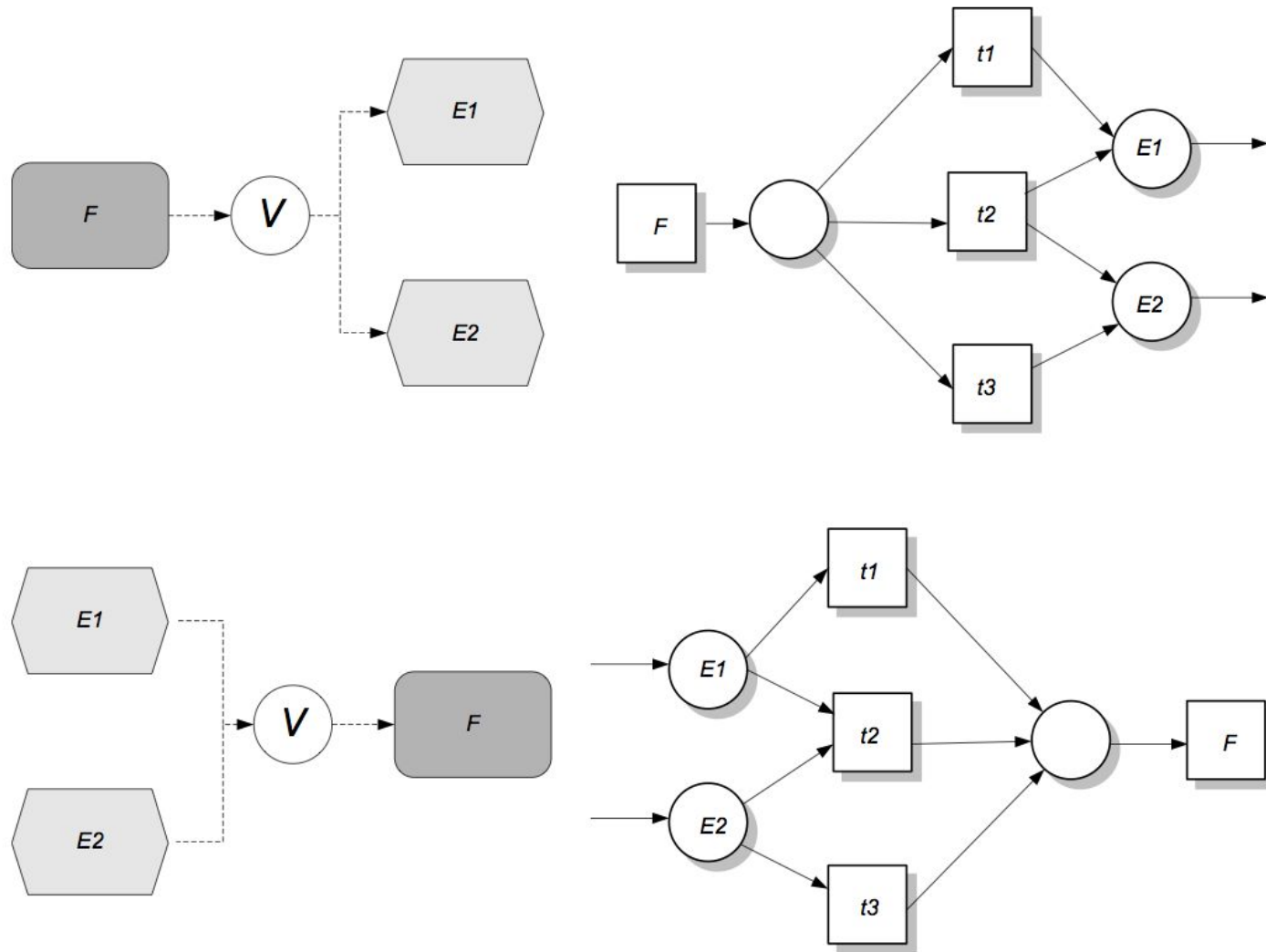


Fig. 6.18. Mapping of event-driven process chain or connector to workflow net

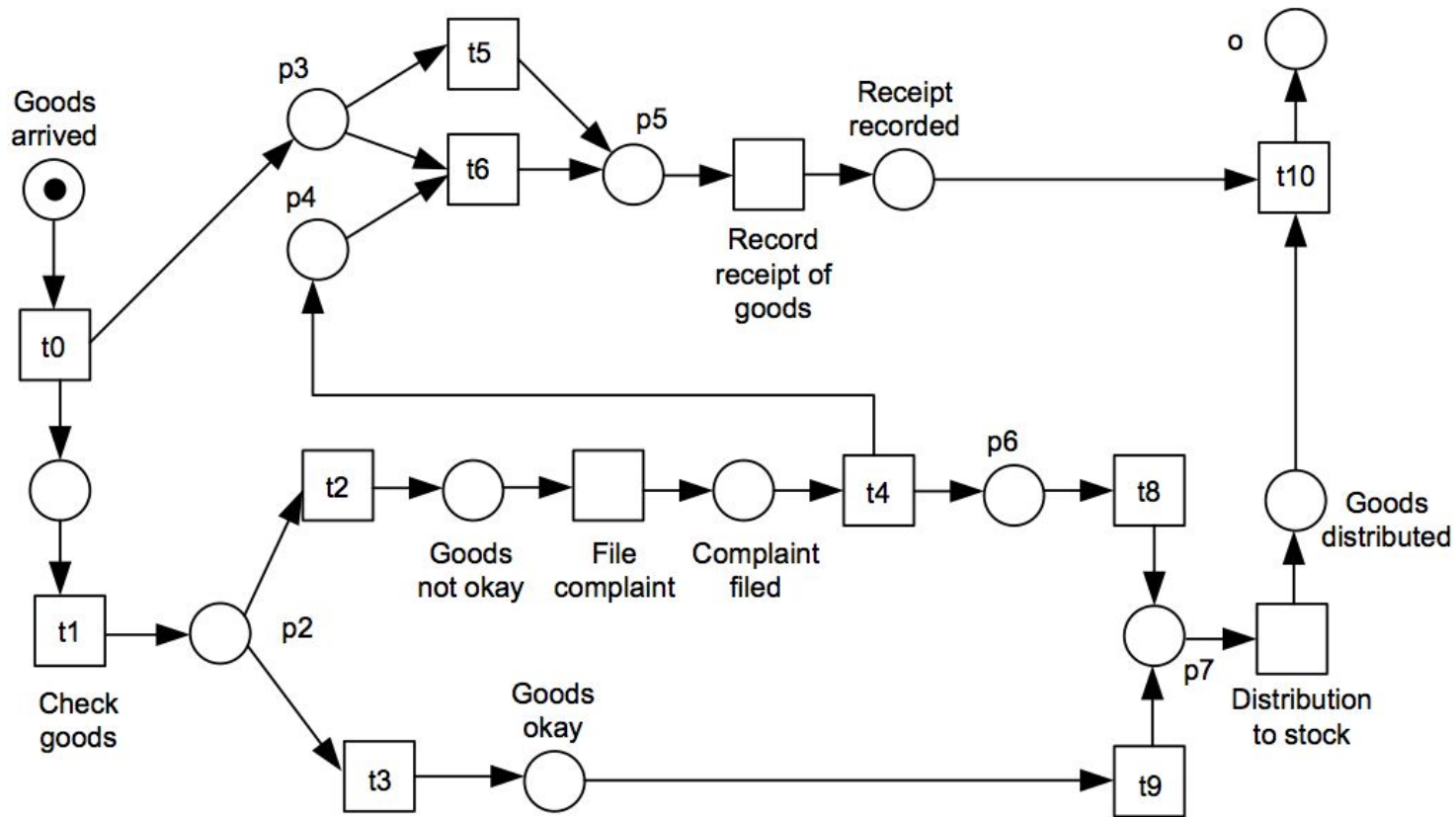
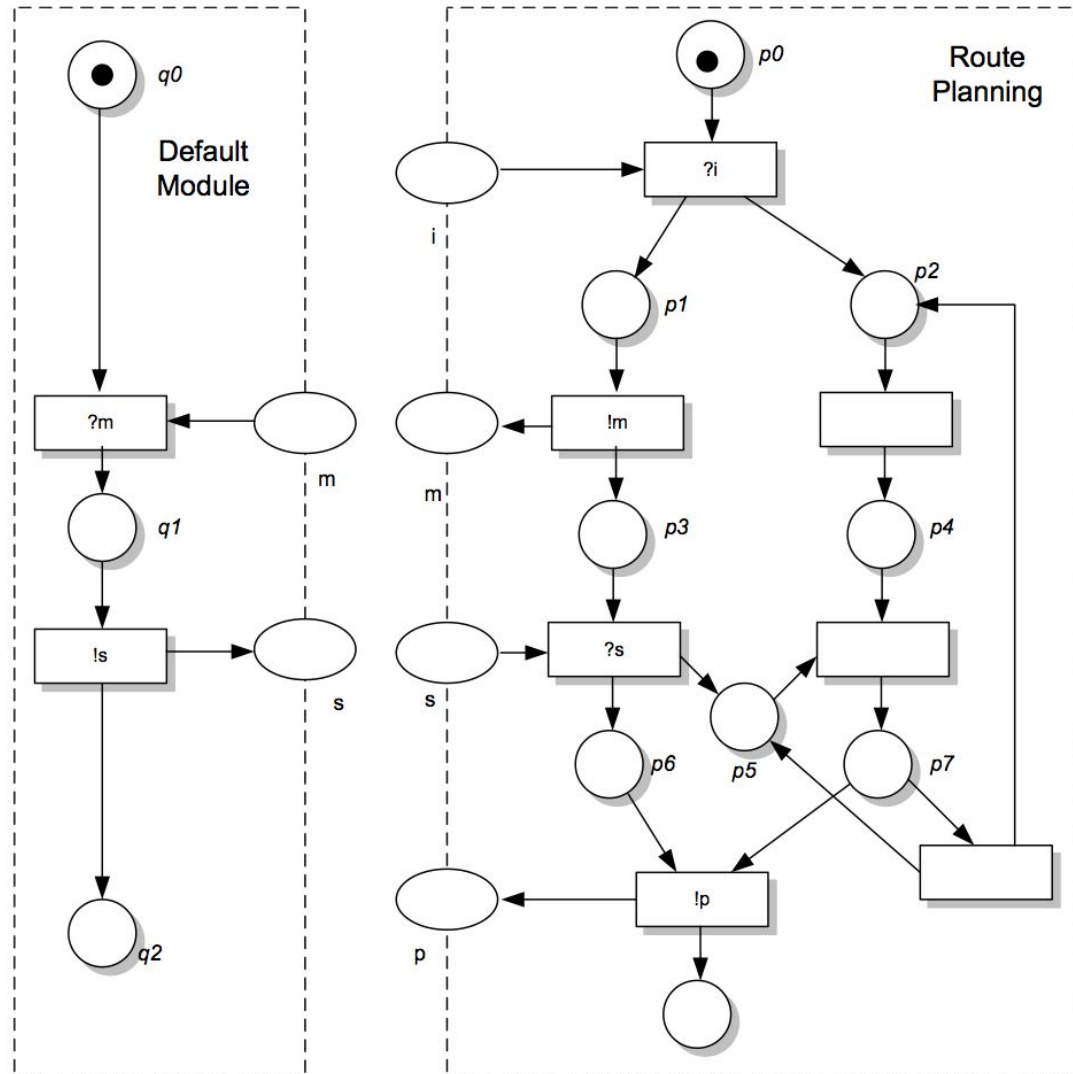


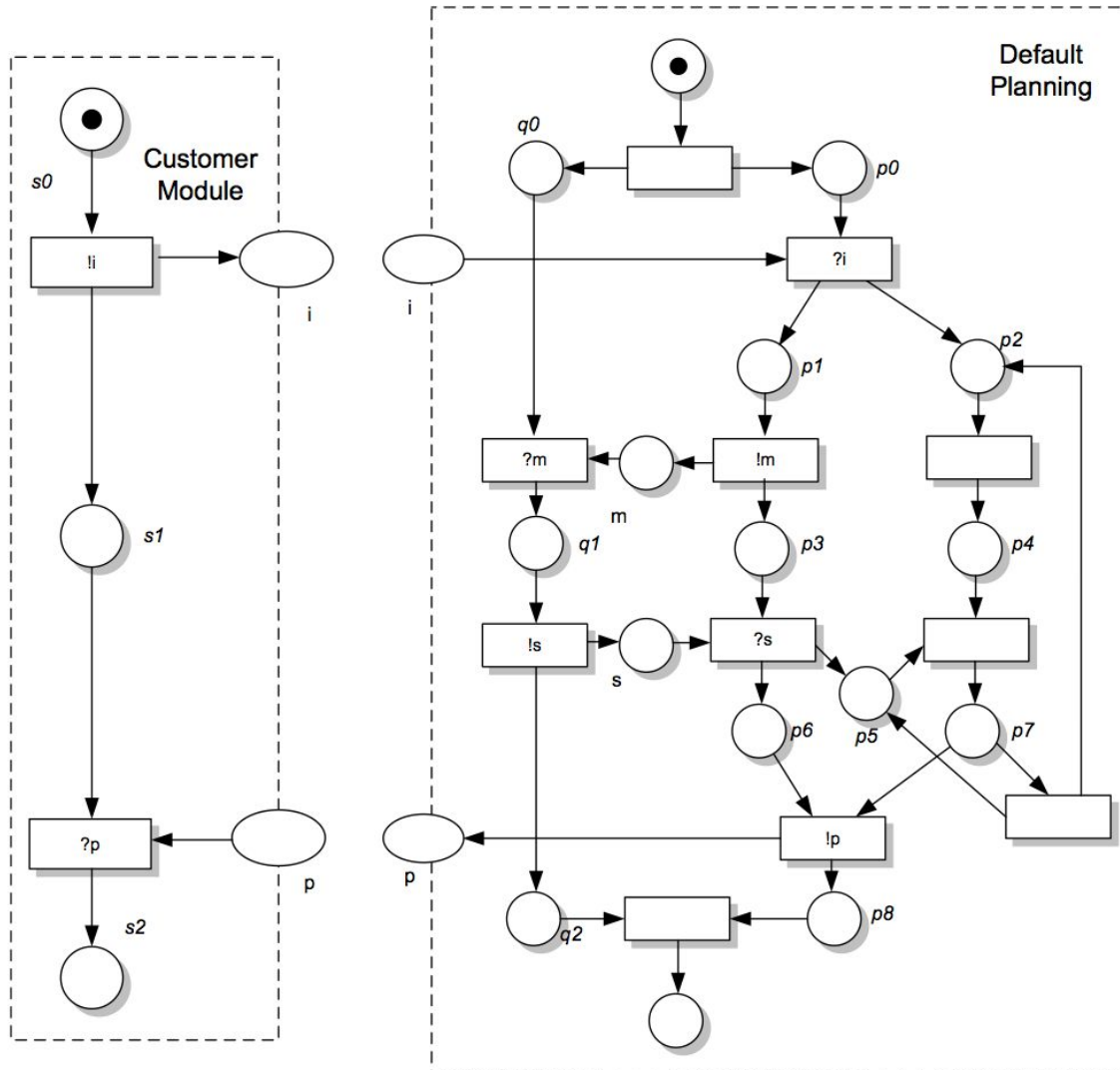
Fig. 6.19. Relaxed sound workflow net

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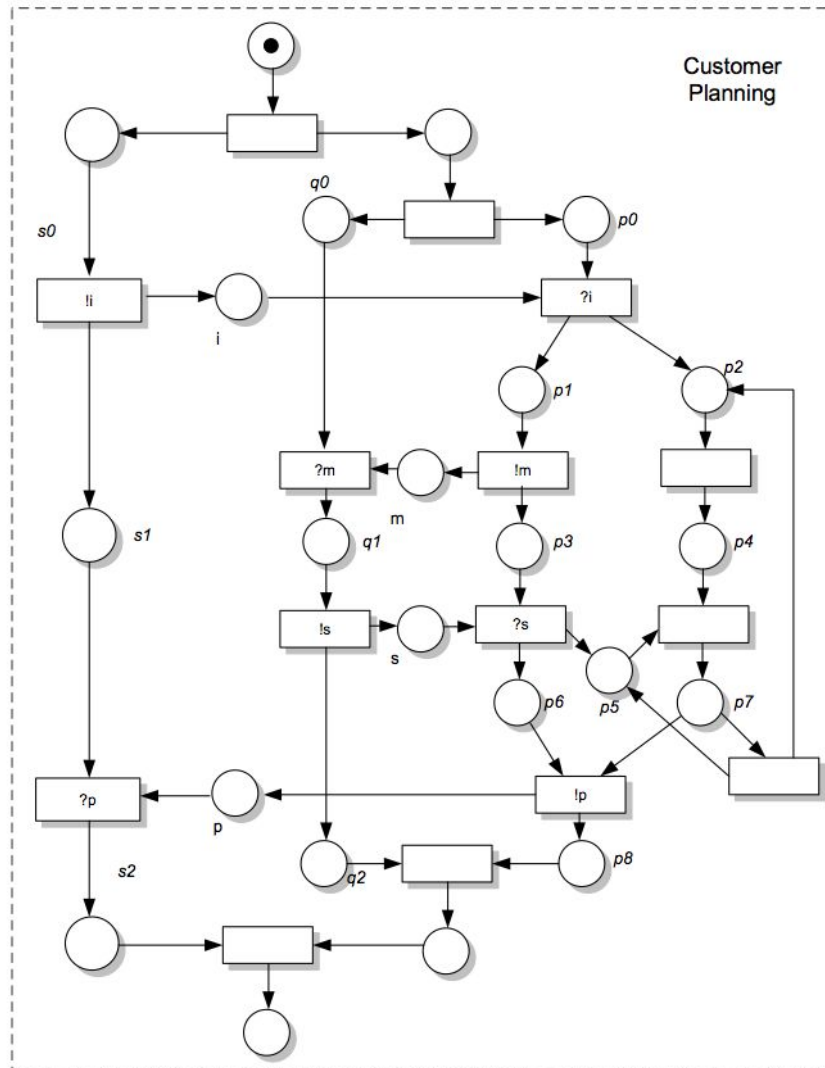
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Fig. 6.20. Workflow module with syntactically compatible default module



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Fig. 6.21. Workflow module default planning and customer workflow module



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Fig. 6.22. Distributed business process composed of three workflow modules

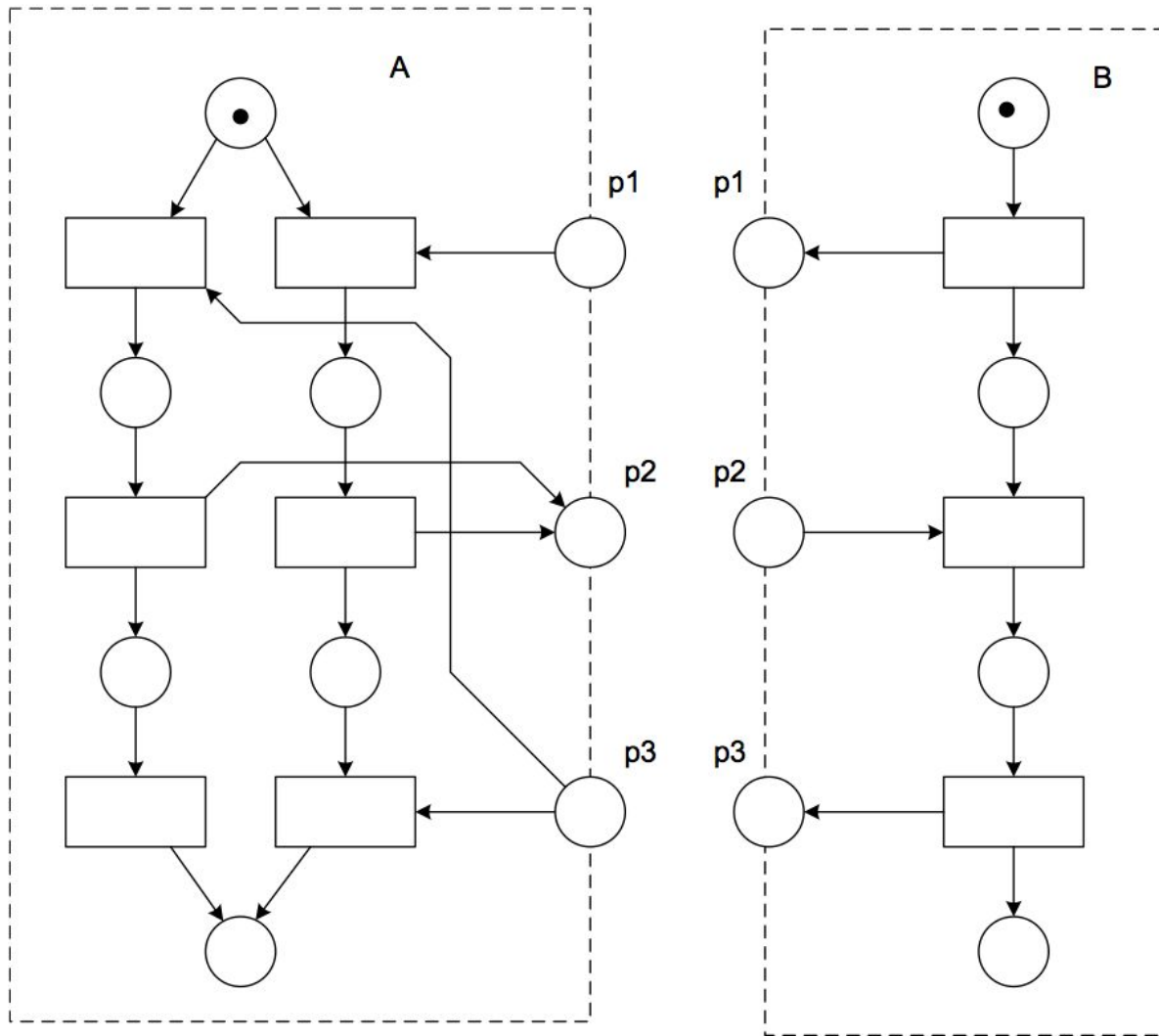
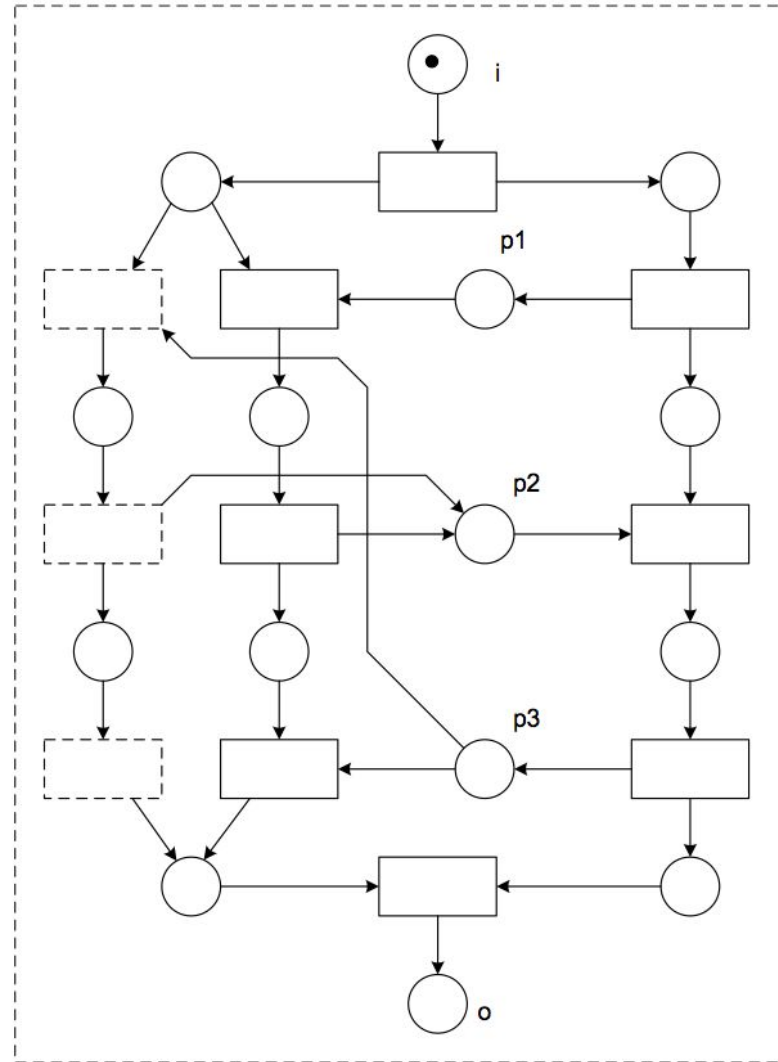


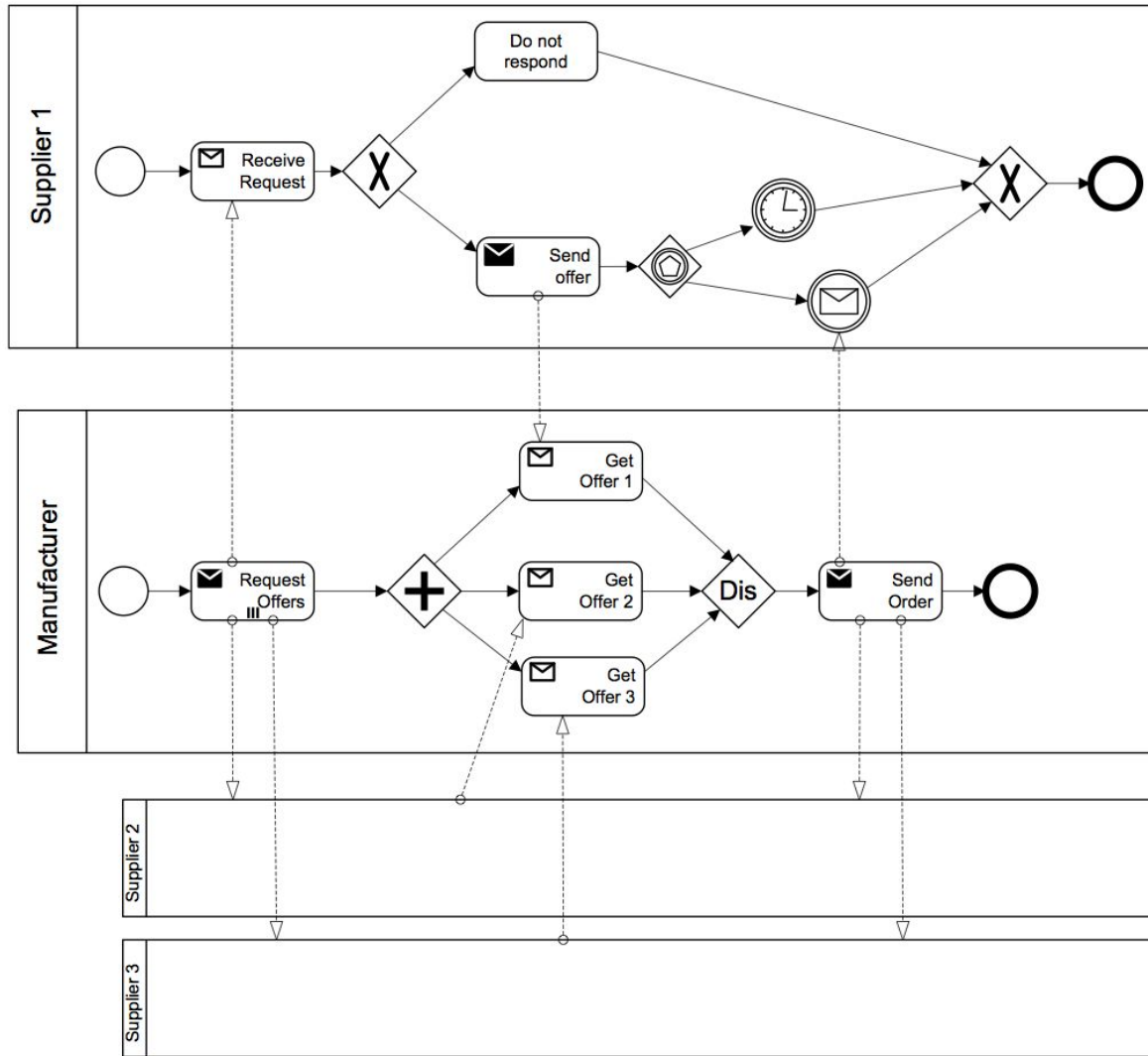
Fig. 6.23. Example of workflow modules with merged communication places

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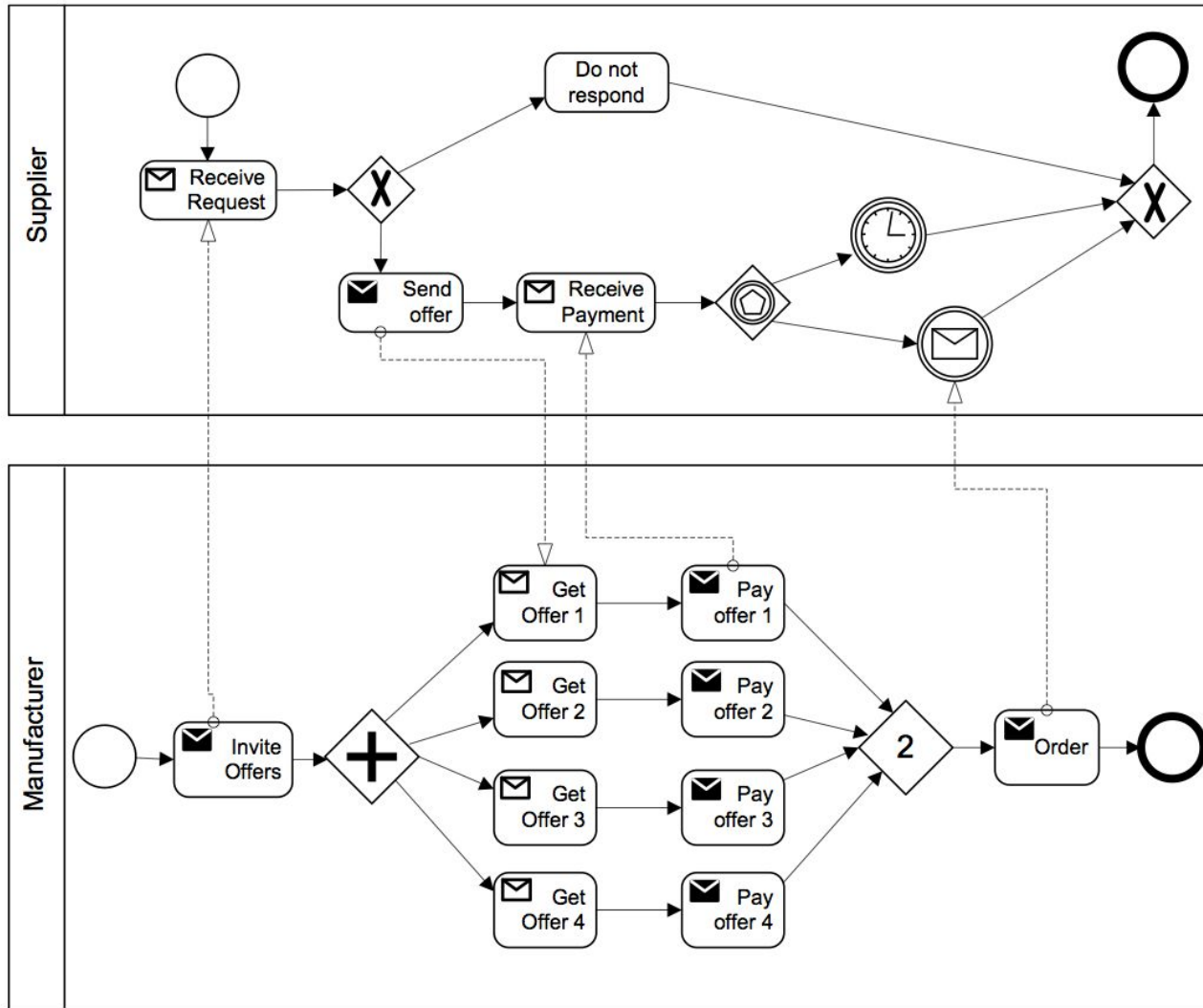
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Fig. 6.24. Example of weak sound workflow net



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Fig. 6.25. Ordering process with discriminator pattern



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Fig. 6.26. Ordering process with N-out-of-M join

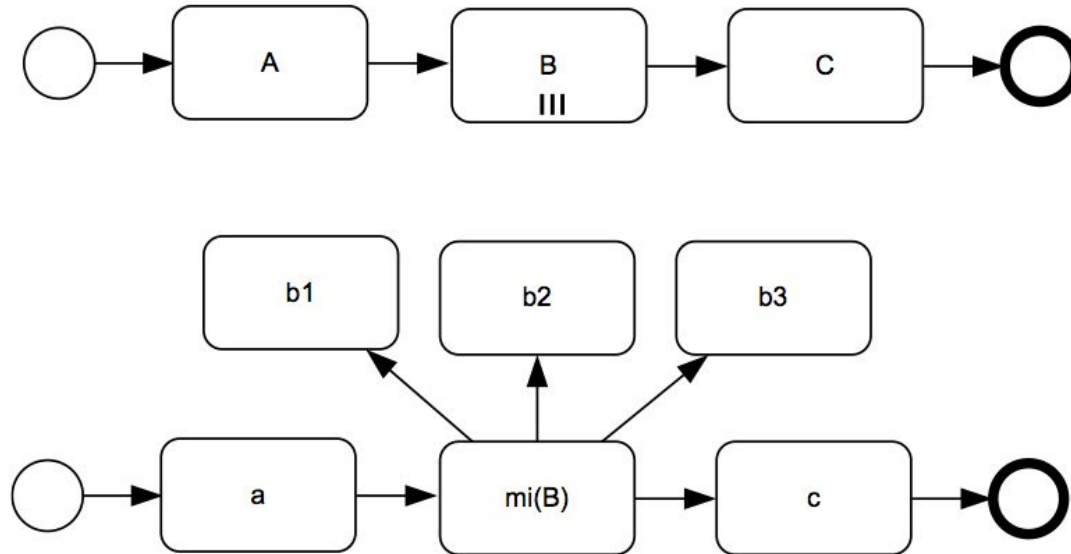


Fig. 6.27. *Multiple instances without synchronization pattern, process model and process instance*

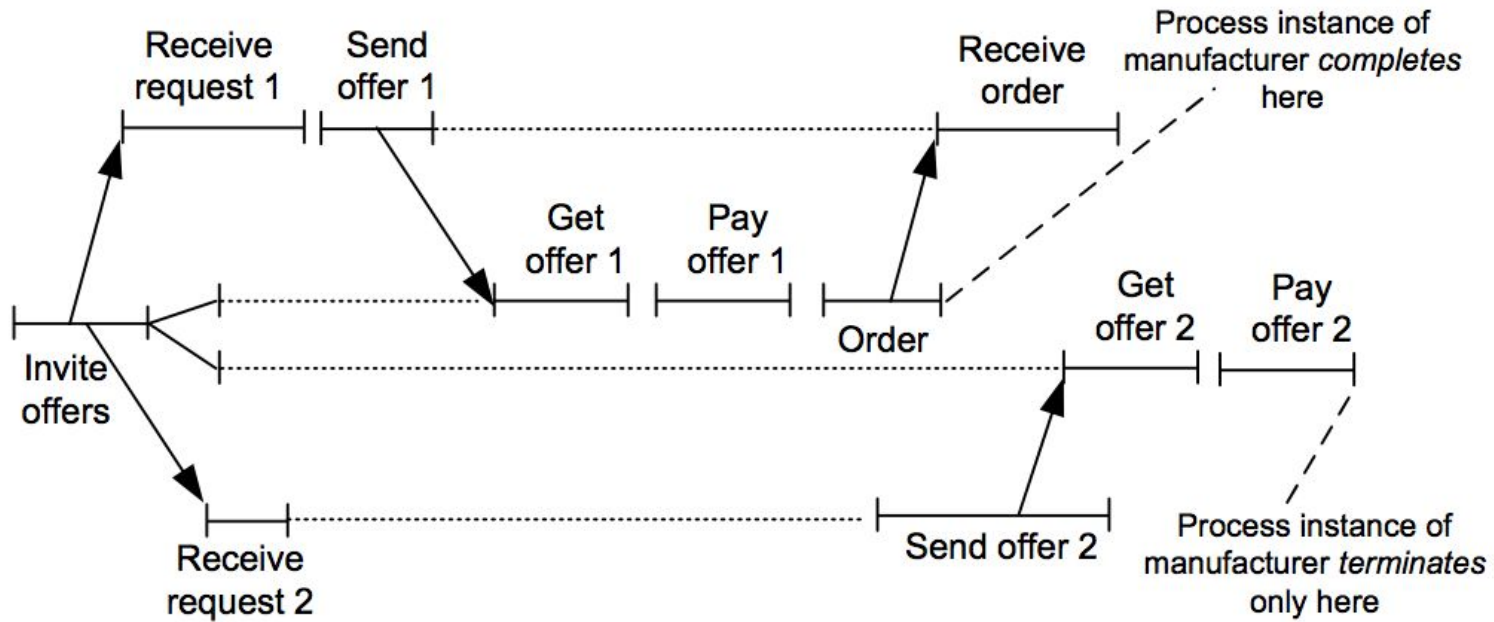


Fig. 6.28. Process instance, illustrating lazy soundness

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