

COM615

Service Modelling Introduction

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Network Management Models

- Models
 - DMTF Common information model (CIM)
 - https://www.dmtf.org/standards/cim/cim_schema_v2550
 - Microsoft WMI
 - <https://learn.microsoft.com/en-us/windows/win32/wmisdk/common-information-model>
 - DMTF Redfish <https://www.dmtf.org/standards/redfish>
 - TM Forum Information Framework (SID)
 - <https://www.tmforum.org/MODA/index.htm>
- The following diagrams are taken from
 - Dr John Strassner DEN-NG (Major contribution to SID)
 - Policy-Based Network Management,: Solutions for the Next Generation (The Morgan Kaufmann Series in Networking) Hardcover by John Strassner (Author) 2003

Modelling Network Devices

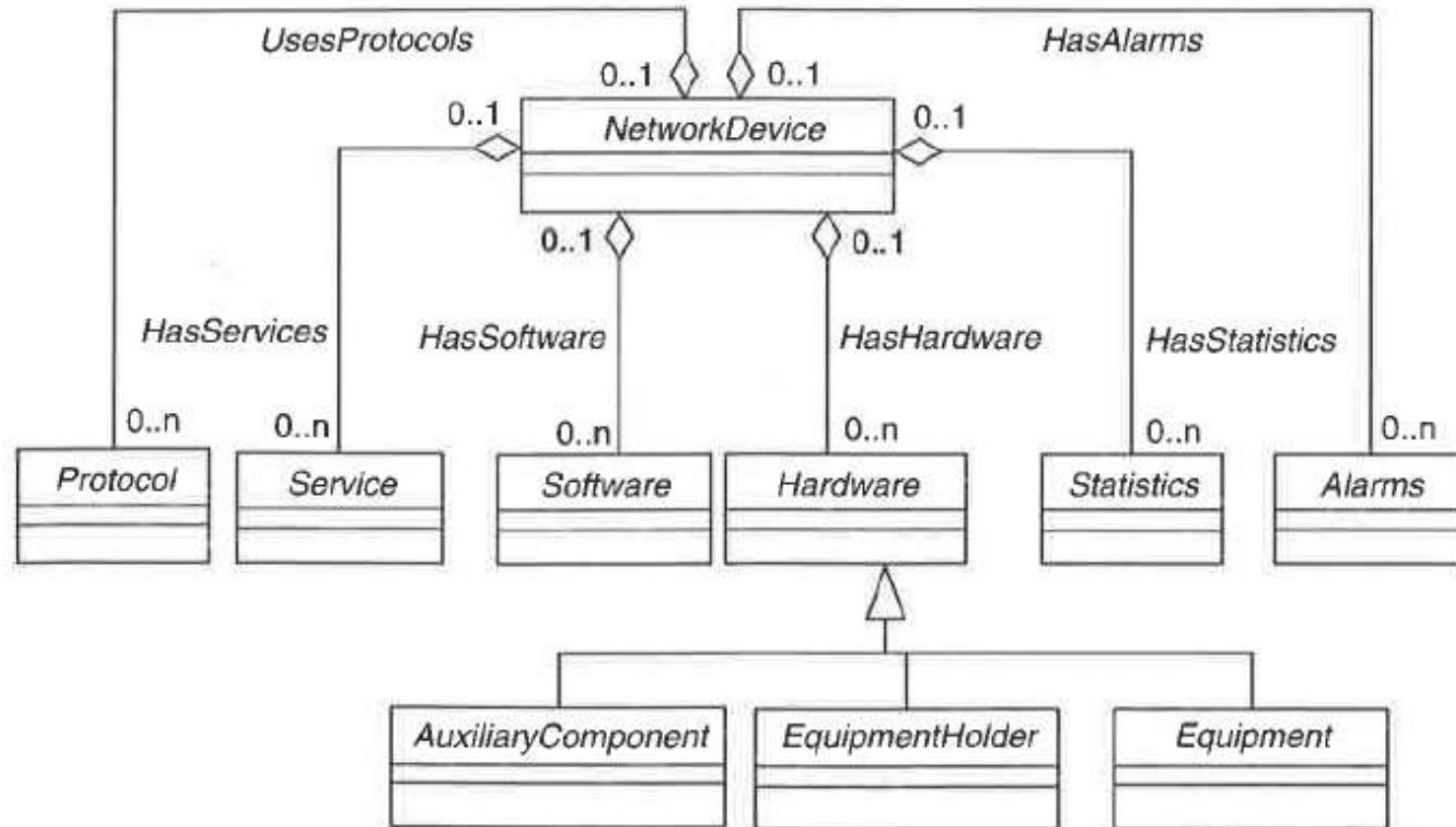


Figure 2-7 Using abstraction to define different aspects of a device.

Modelling Good and Bad Approaches

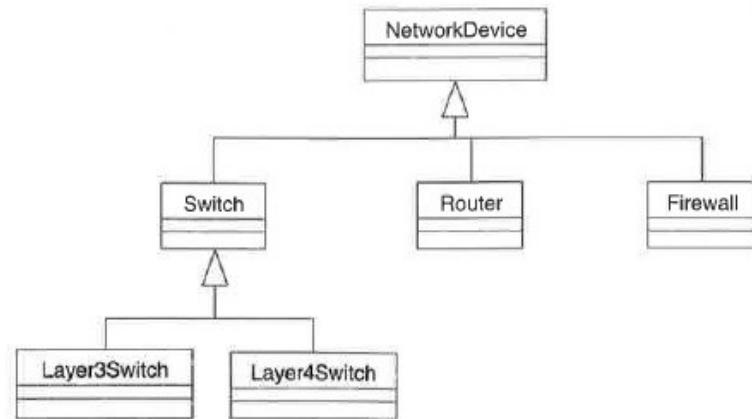


Figure 2-2 Trying to model layer 3 and layer 4 switches—a bad approach.

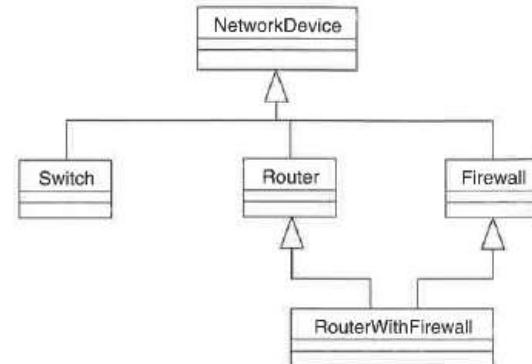


Figure 2-3 Trying to model a router with firewall capabilities—a bad approach.

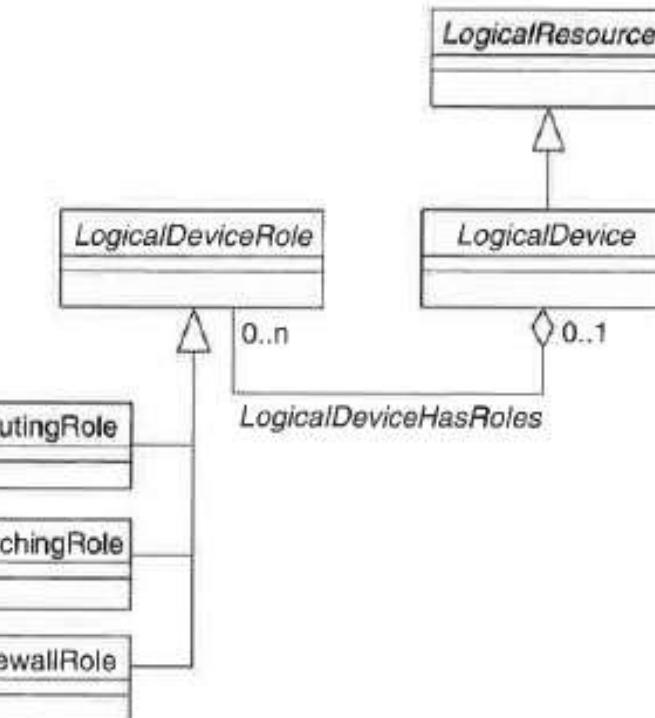


Figure 2-4 Using roles in DEN-ng to model device functionality.

Resource Roles

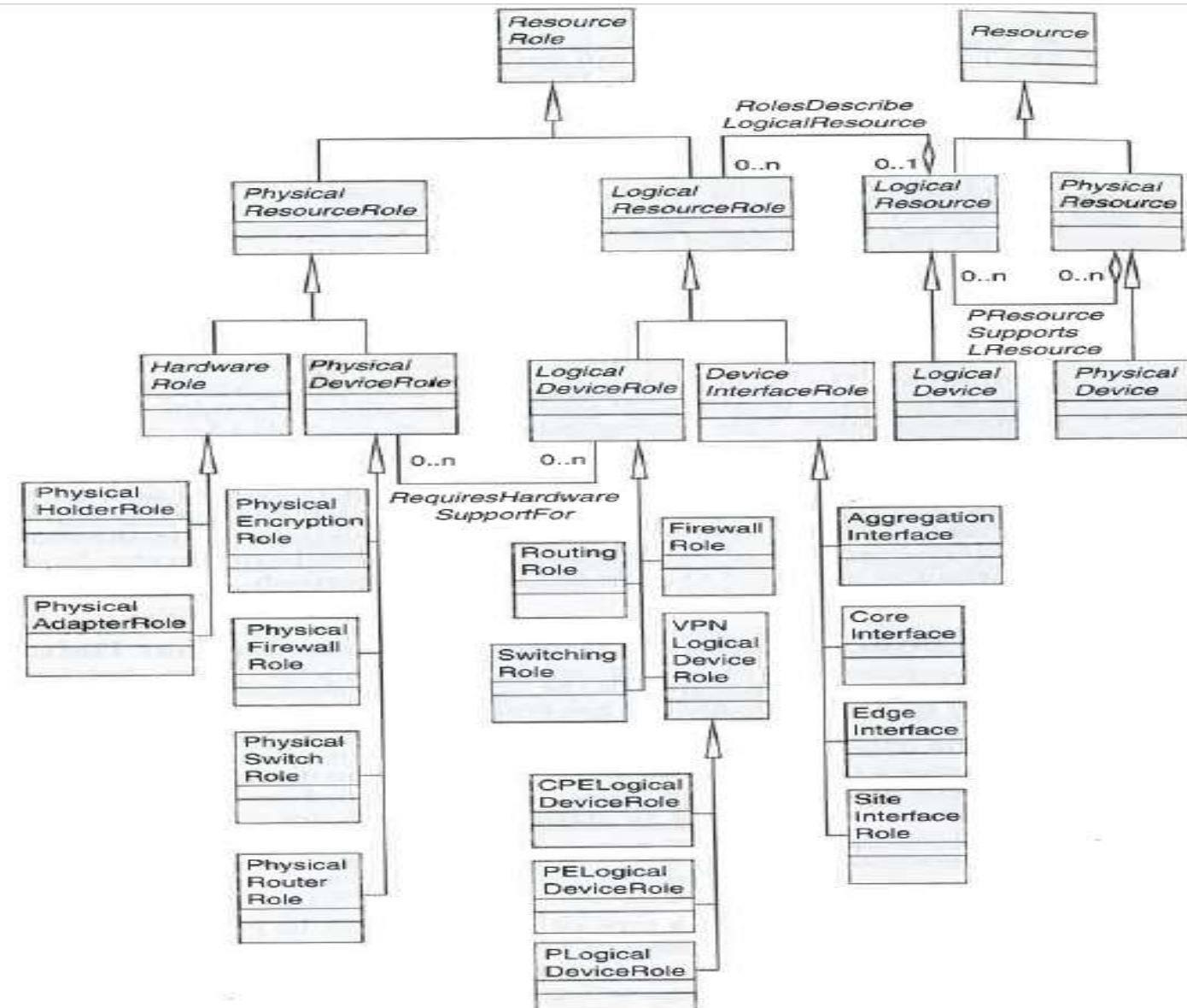


Figure 5-2 DEN-ng *ResourceRole* interaction.

Specifications vs Entities

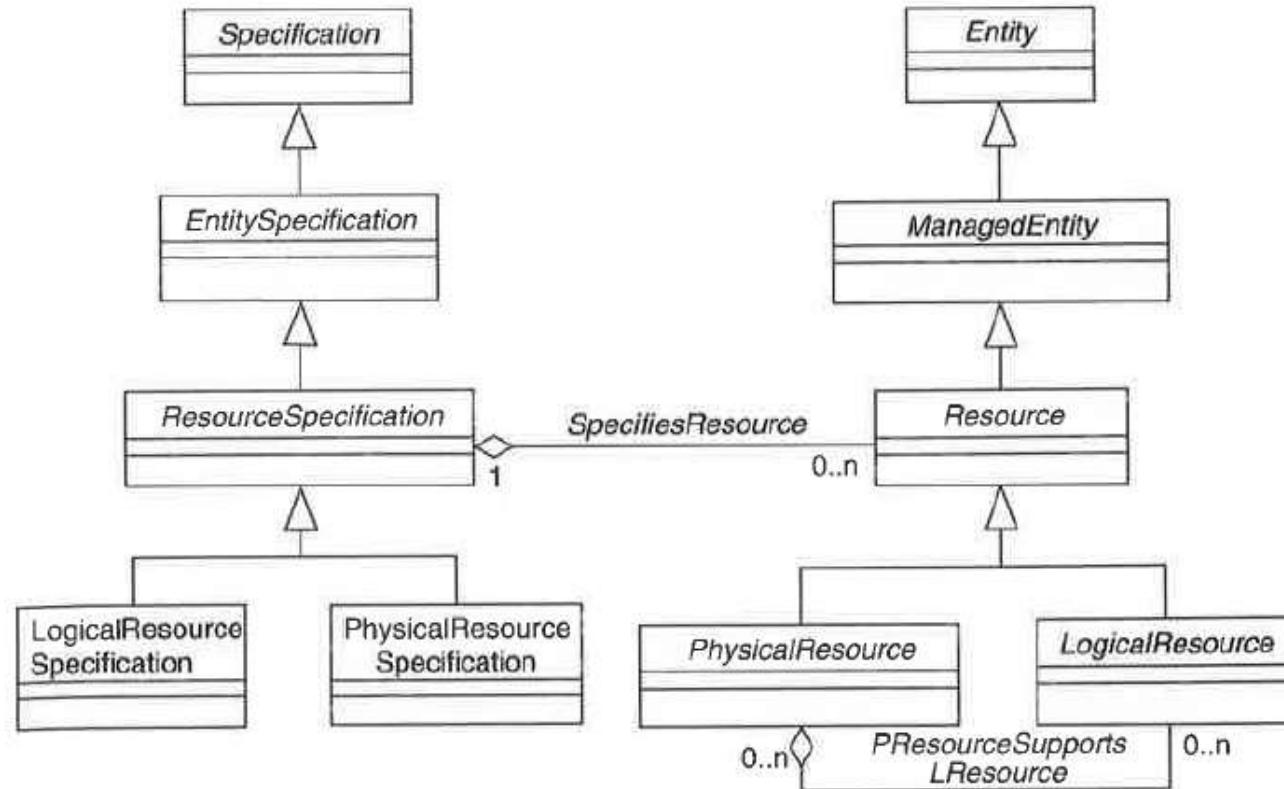


Figure 2-8 The use of *Specifications* in the DEN-ng model.

Product Service Resource

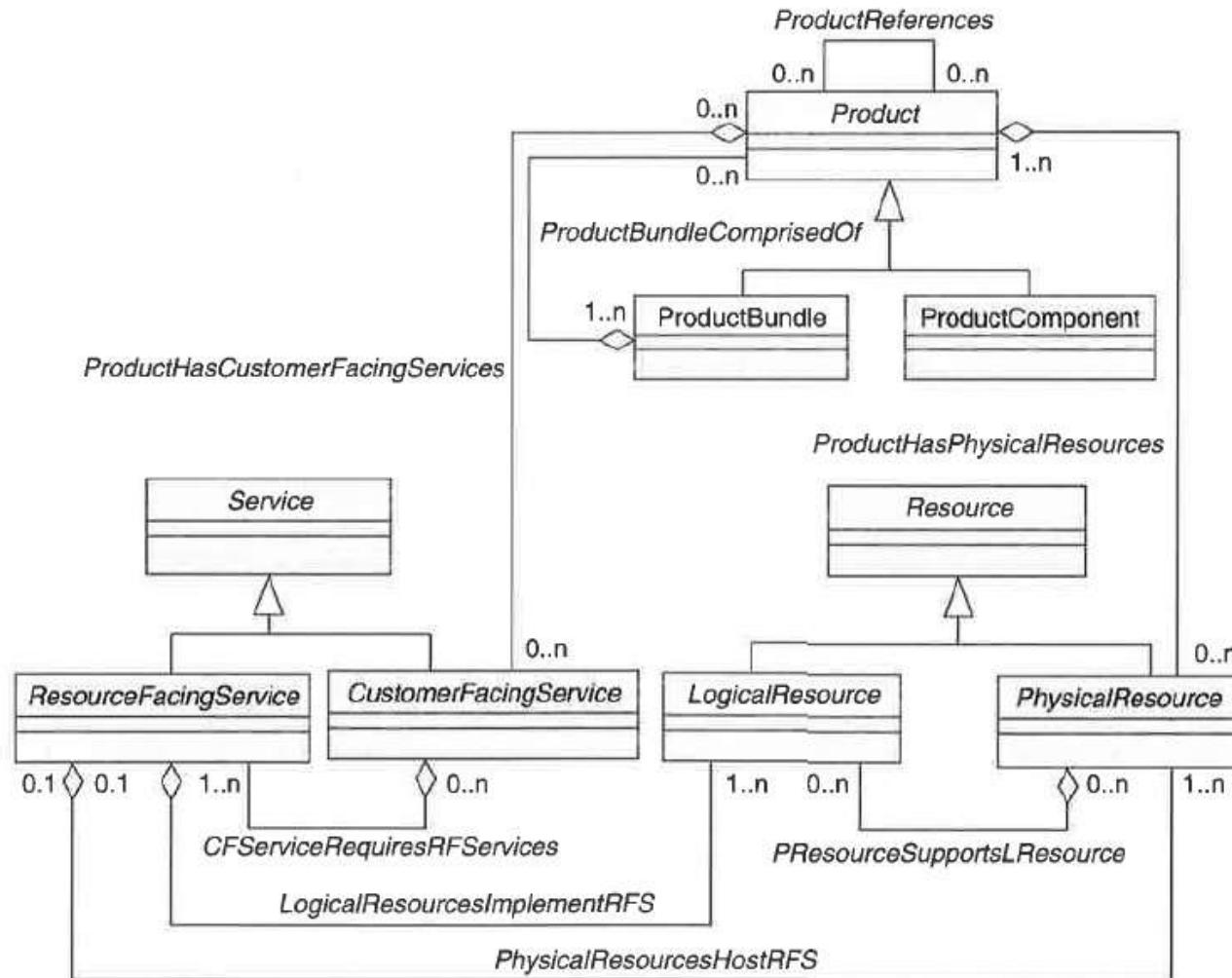


Figure 10-13 Relationship between *Product*, *Service*, and *Resource* in the DEN-ng model.

Simple Party Model

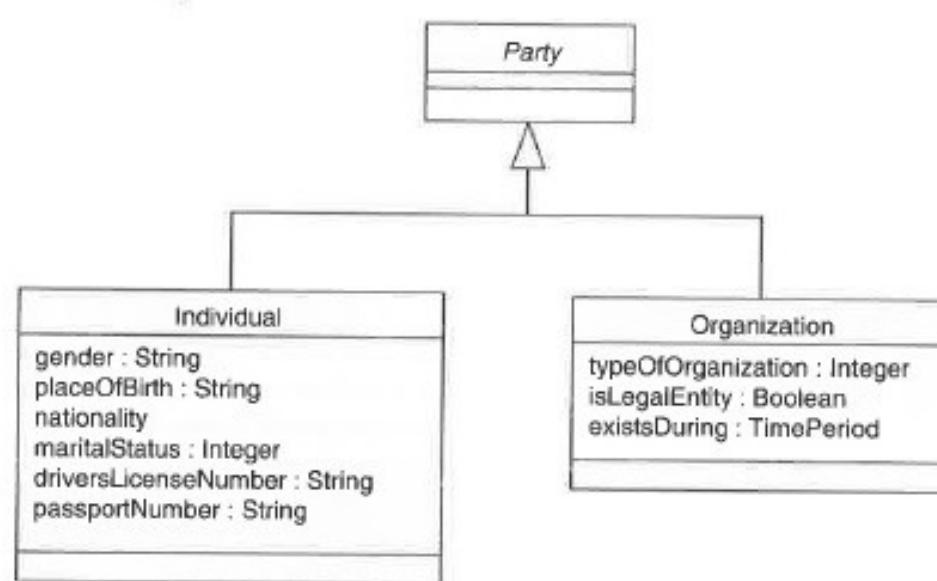


Figure 2-5 Simple business model of a party.

Party Role Pattern

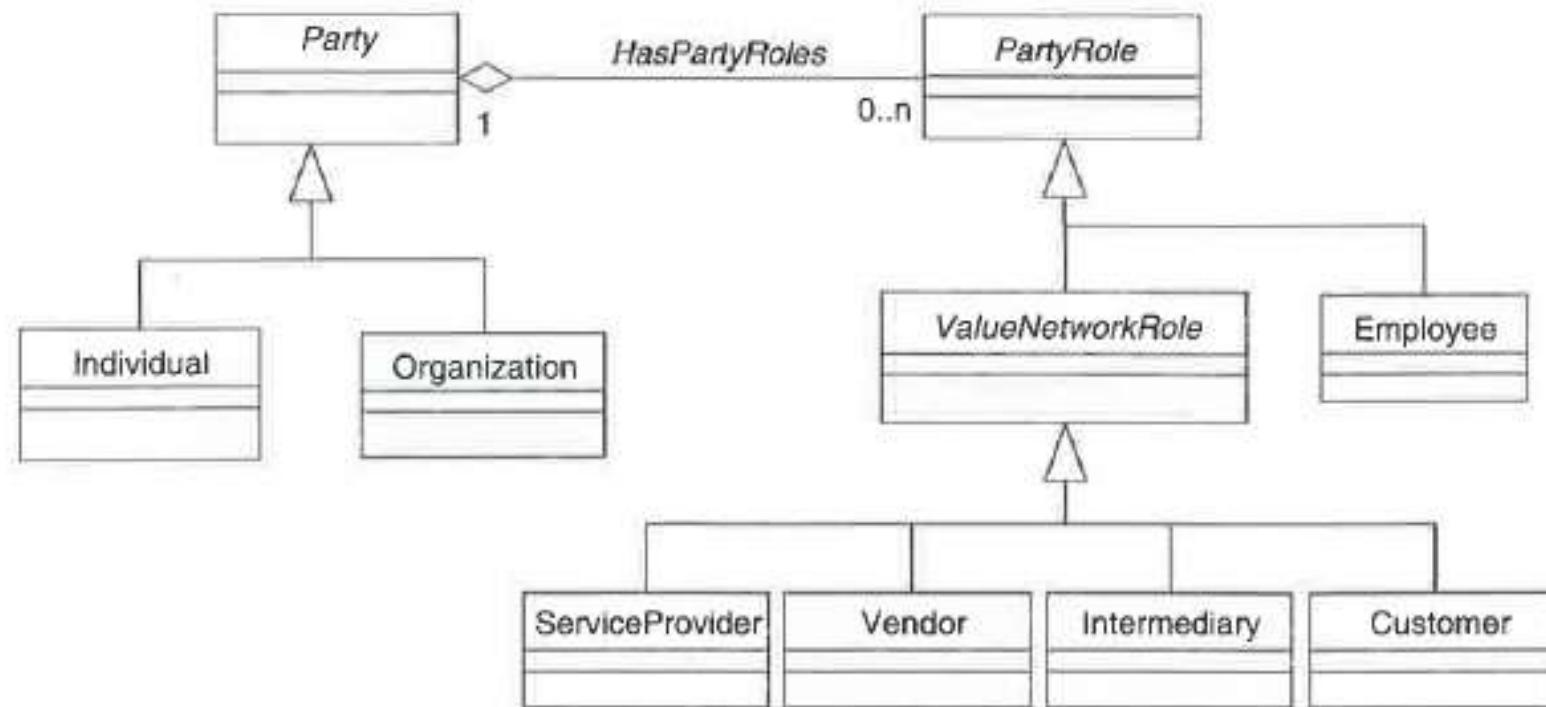


Figure 2-6 Improved business model of a party, using the role object pattern.

Business interactions and roles

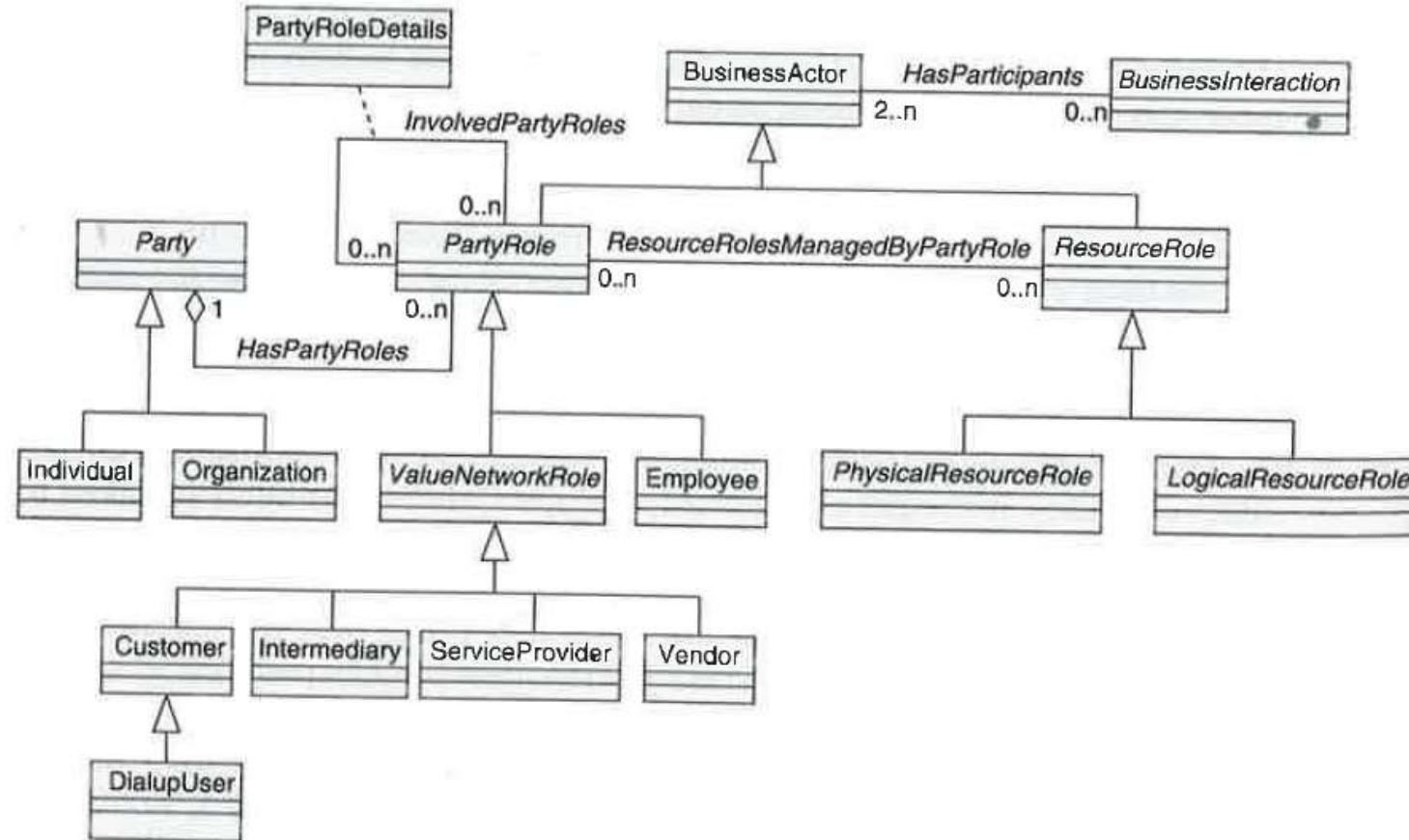


Figure 5-31 Excerpt of the DEN-ng party model.