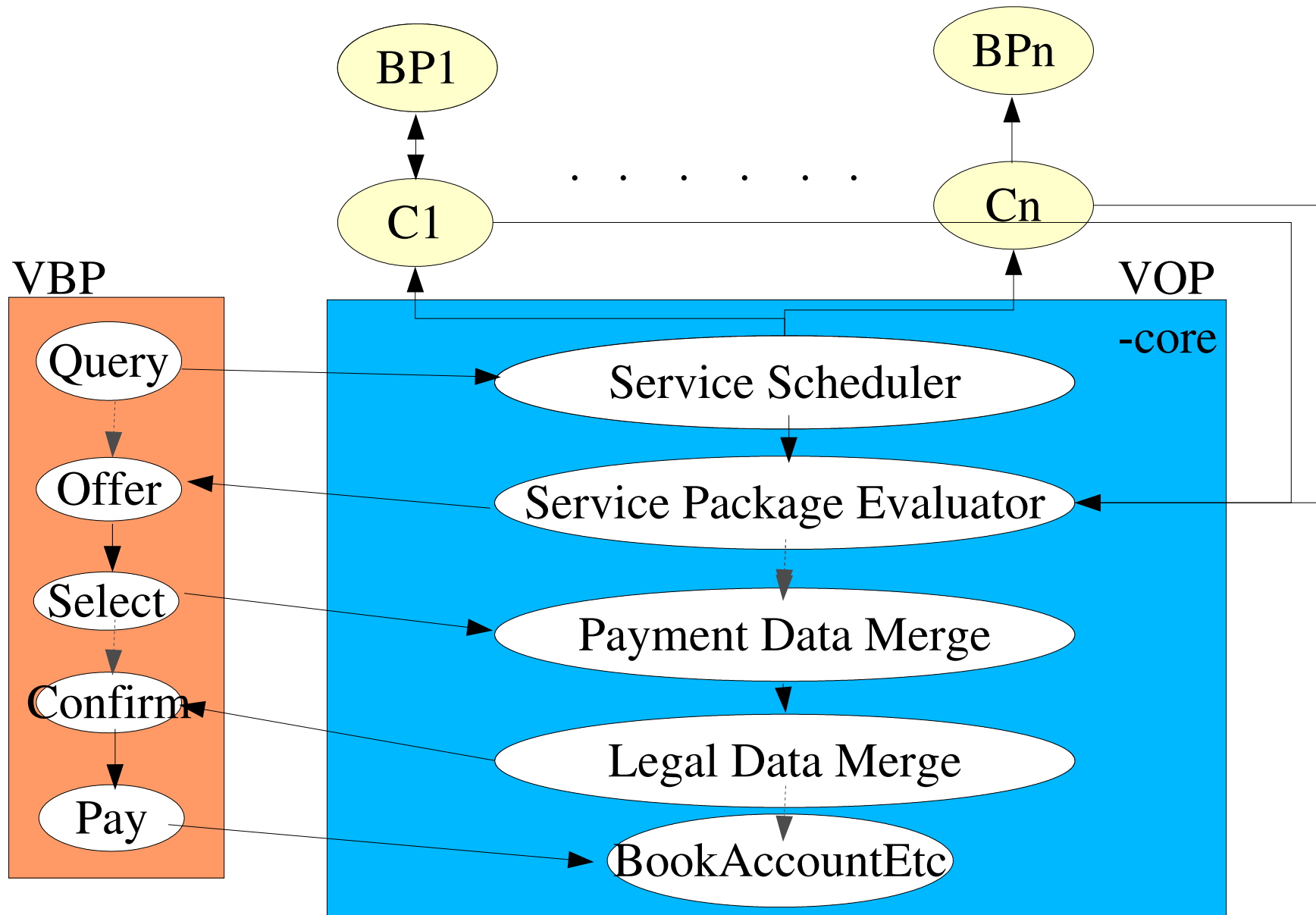


A CBP (communicating with BPs)



Legend

- CBP : Collaborative Business Process
- VOP_{core} : (Overall) Virtual Organization Process
- VBP : (Virtual) Business Process (as the user sees it)
- BP(i) : Business Process i (Private View)
- C(i) : Choreographer Process i (External View)
- WS-DL: (web service description language)
used to describe the data model of the BP
service.

Examples

- “The Ryan-Air Business Process”
 - modelled directly from the Ryan Air Web pages.
 - consists of
 - a class diagram (roughly corresponding to a WS-DL, but using OCL in order to specify side-constraints of the data model)
 - a statechart diagram (modeling the activities as such), could be extended to activity diagrams.
- Problem: Abstract Description of Synchronization
VERY tedious in Activity Diagrams ...
One would like to describe Core Processes independently...

Understanding “Choreographies”

- There are essentially two approaches to model “CDL”:
- A: Renaming Approach:
 - Events in BP's are renamed and synchronized with synchronization points in VOP-core
 - In CSP notation:
 - $(BP(i) [\Sigma_{bp(i)} \mapsto \Sigma_{core}]) \llbracket \Sigma_{core} \rrbracket VO_{core}$
 - Advantage: Semantics simple;
 - Problem: No flexibility in process adaption; synchronization points must fit one-to-one.

Understanding “Choreographies”

- There are essentially two approaches to model “CDL”:
- B: The choreographer process approach:
 - Events in BP's are synchronized with a *choreographer process* $C(i)$. It collects data, handles exceptions, and transfers them to the VOP-core protocol. In CSP notation:
 - $(BP(i) \llbracket \Sigma_{bp(i)} \rrbracket C(i)) \llbracket \Sigma_{core} \rrbracket VO_{core}$
 - Advantage: Very flexible
 - Problem: Semantics more involved, explicit $C(i)$ necessary