

# Applicability Considerations of Differentiated Services

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- Consistent end-to-end services
- Interdependence of providers
- Requirements for Realistic Scenarios



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## Consistent End-to-End Services

- ❑ Users are interested in predictable end-to-end services
- ❑ DiffServ gives a lot of design freedom of how to construct services based on PHBs
- ❑ Even if every DS domain uses the same PHB for a service:  
PHB implementations may have different parameters,  
e.g., different drop probabilities for an AF-PHB
  - ⇒ actual service performance depends on the concrete, current path and may vary with destination
- ❑ Will providers agree to define a common set of standardized services?
- ❑ A common service description object is needed for bilateral negotiation of SLAs, e.g., via Bandwidth Brokers



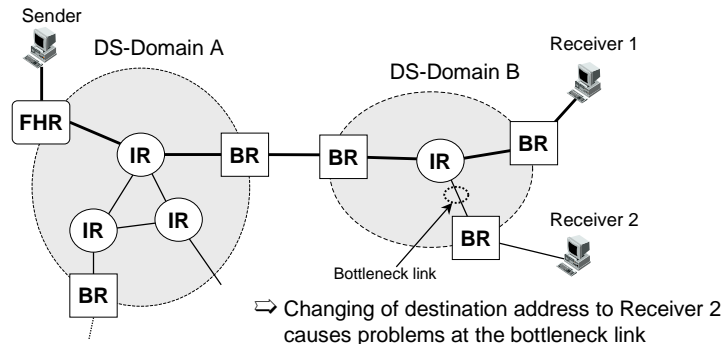
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## Interdependence of Providers

- ❑ For service provisioning, providers have to rely on each other
- ❑ First-hop router is the only protection against misbehaving flows
- ❑ A provider cannot filter out specific flows within an aggregate



- ❑ Will providers accept this strong interdependence?



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## Requirements for Realistic Scenarios

- ❑ Simulations usually have limits in generating realistic application traffic
- ❑ There are already some DiffServ implementations available (our's was presented at IWQoS'99, the paper also includes some evaluation details, see <http://www.telematik.informatik.uni-karlsruhe.de/forschung/diffserv/kids/>)
- ❑ For measurements often only one DS domain serves as testbed (not enough for evaluation of end-to-end services)
- ❑ Testing aggregation effects and management interoperability requires several DS domains
- ❑ What does a representative DS scenario look like?
  - How many DS domains from end-to-end (average and worst case)?
  - How many nodes within a DS domain?



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