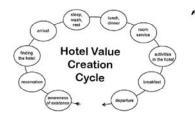
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Service Innovation

Using Design Patterns

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Who am I, and why am I here?

- Bob Glushko is an Adjunct Full Professor at the University of California at Berkeley in the School of Information
- He is one of the founding faculty members of the Information & Service Design program, and "design patterns" for service systems are central to his courses
- Twenty years of "real world" R&D, consulting, and entrepreneurial experience in information systems and service design, content management, electronic publishing, Internet commerce before coming to Berkeley in 2002

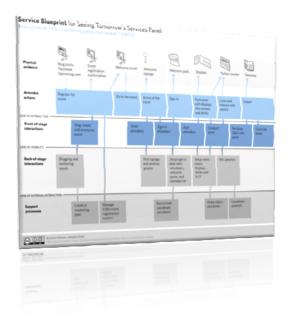


A Taxonomy of Service Design Patterns

- Patterns that that describe interconnected services or processes
 - Component business models
 - Process reference models (SCOR, RosettaNet, ...)
- Patterns that describe "service families" systematic design alternatives (or evolutionary roadmap) for a particular service
- Patterns that describe service systems



Service System Design Patterns



- Seven contexts building blocks for service systems
- Adjusting the absolute and relative amount of interpersonal, physical and informational interaction
- Adjusting the line of visibility between the front and back stages
- The number of "touch points" or "stored information equivalents"
- Transparent substitutability



Service Design Contexts



Contexts as Building Blocks

- Describing and designing service systems in terms of the seven contexts makes it much easier to consider alternative service system designs:
 - replacing or augmenting a person-to-person service with self-service
 - substituting one service provider for another in the same role (e.g, through outsourcing)
 - eliminating a person-to-person interaction with automation or stored information



Front Stage and Back Stage

- FRONT STAGE: Where interactions with the service customer/ consumer happen
- BACK STAGE: Produces information and "stuff" needed by the front stage
- Placement of LINE OF VISIBILITY is a design parameter



"Touch Points" and Service Intensity / Quality

- Services differ intrinsically in the number of touch points they require to create value; this is often called the service intensity
- Traditional P2P service system design assumes that intensity is positively correlated with service quality
- This view lets us treat intensity as a design parameter to differentiate service offerings of the same type or industry domain
- The "generic" service offering is a design pattern that can be increased or reduced in intensity by changing the number of touch points

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Information and Interaction Substitutability

- Capturing, managing, integrating and retrieving information allows service providers to substitute information for interaction
- You don't need high intensity or many touch points if stored information makes interaction unnecessary
- A hotel clerk with a database doesn't need to ask for your room preferences; Amazon doesn't need to ask you about what type of books you like
- Design implication: *hidden computational services are interchangeable with customer-facing "touch points"*



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Transparent Substitutability

- Providers and consumers interact by exchanging information through "service interfaces" that specify the inputs and outputs of each service
- These interfaces are implicit in P2P encounters, but always explicit for non-human actors
- In the purest vision of "service oriented architecture," the interfaces are abstract, enabling *transparent substitution of one provider for another* to optimize service quality for each consumer

Summary

- Design patterns have a central place in engineering, architecture and computing but haven't been a focus of service system design and operations
- ■The more abstract conception of services and service interfaces embodied in design patterns assists in analysis, encourages best practices, and facilitates innovation
- These design patterns can be taught to and used successfully by university students and practitioners

