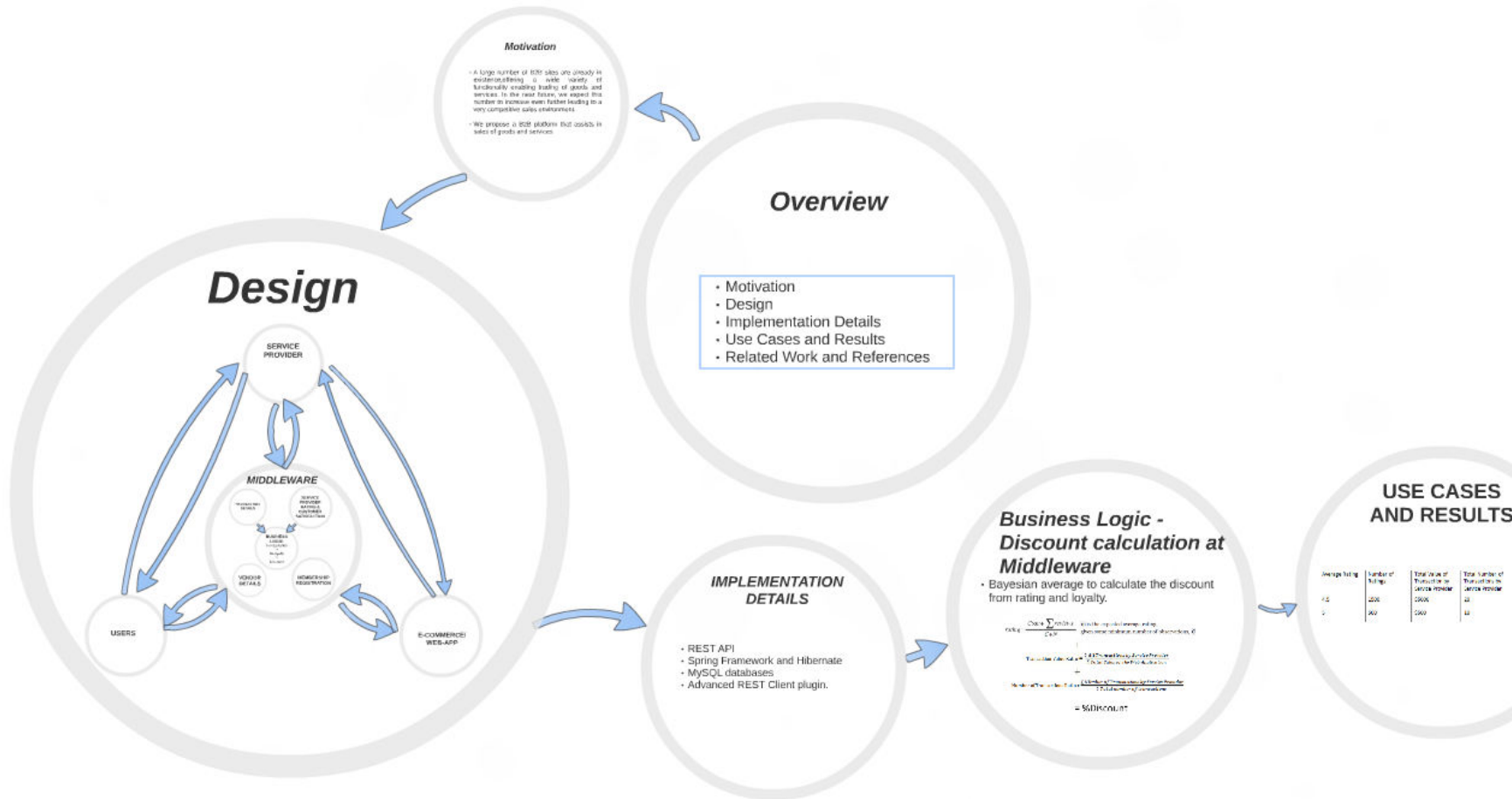


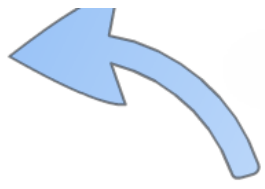
Reputation Based Enterprise Sales Service Provider

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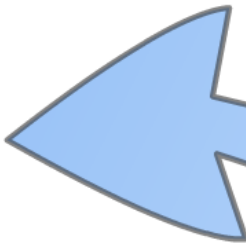


Overview

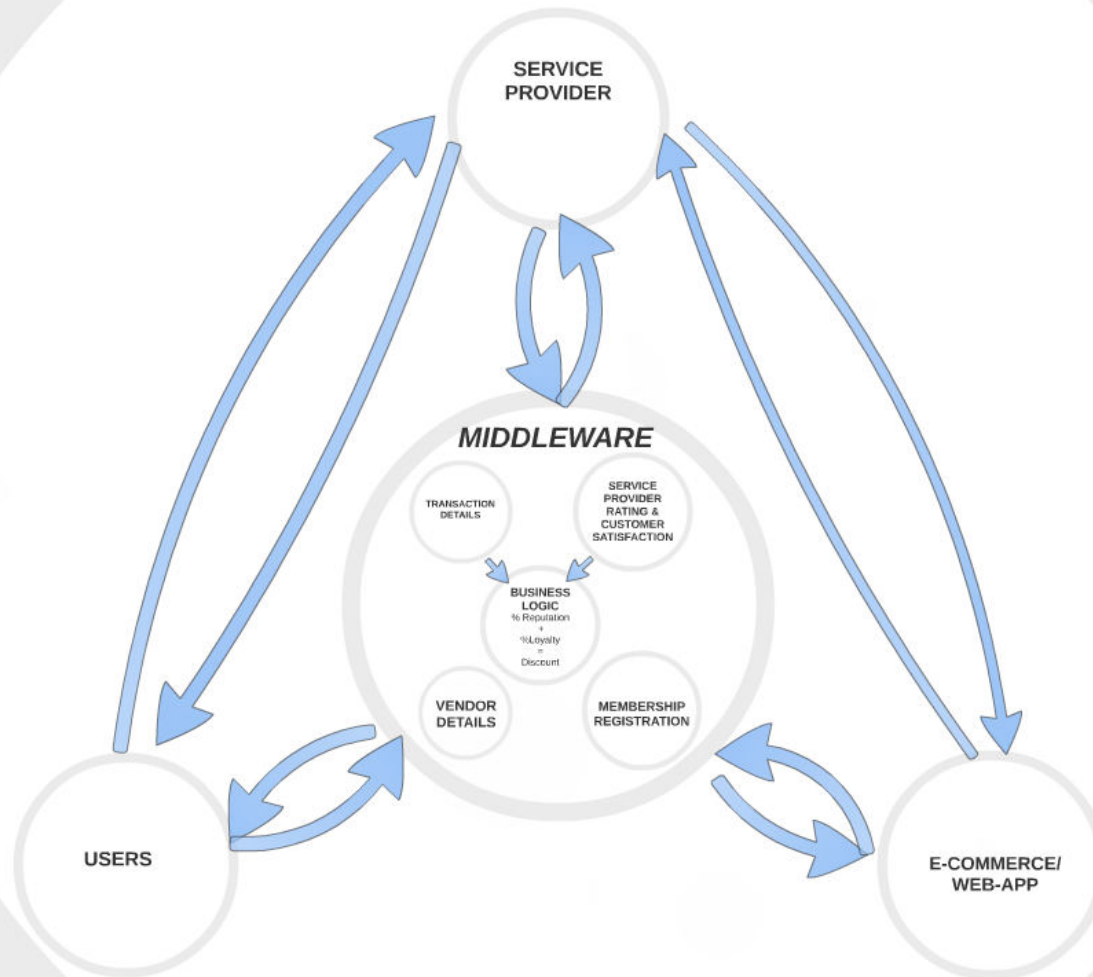
- Motivation
- Design
- Implementation Details
- Use Cases and Results
- Related Work and References

Motivation

- A large number of B2B sites are already in existence, offering a wide variety of functionality enabling trading of goods and services. In the near future, we expect this number to increase even further leading to a very competitive sales environment.
- We propose a B2B platform that assists in sales of goods and services



Design



MIDDLEWARE

TRANSACTION
DETAILS

SERVICE
PROVIDER
RATING &
CUSTOMER
SATISFACTION

**BUSINESS
LOGIC**
% Reputation
+
% Loyalty
=
Discount

VENDOR
DETAILS

MEMBERSHIP
REGISTRATION

IMPLEMENTATION DETAILS

- REST API
- Spring Framework and Hibernate
- MySQL databases
- Advanced REST Client plugin.

Business Logic - Discount calculation at Middleware

- Bayesian average to calculate the discount from rating and loyalty.

$$rating = \frac{C \times \bar{m} + \sum reviews}{C + N}$$

\bar{m} is the expected average rating,
given some minimum number of observations, C

+

$$\text{Transaction Value Ratio} = \frac{\sum \text{All Transactions by Service Provider}}{\sum \text{Total Sales of the Web Application}}$$

+

$$\text{Number of Transactions Ratio} = \frac{\sum \text{Number of Transactions by Service Provider}}{\sum \text{Total number of transactions}}$$

= %Discount

USE CASES AND RESULTS

Average Rating	Number of Ratings	Total Value of Transaction by Service Provider	Total Number of Transactions by Service Provider	Discount Calculated by Middleware
4.5	1500	\$5000	20	11%
5	500	\$500	10	4.5%

RELATED WORK AND REFERENCES

- A platform for business-to-business sell-side, private exchanges and marketplaces by J. Sairamesh and C. Bender
- Service Communities: Applications and Middleware by Stefan Tai - IBM Research
- Computing a Bayesian Estimate of Star Rating Means - Benjamin Bengfort
- Bayesian Model Averaging by Jennifer A. Hoeting, David Madigan



THANK YOU

