

CuCoMaG

Supporting reflection in virtual role
playing environments (serious games)

Collaborative Learning In Intelligent Distributed
Environments

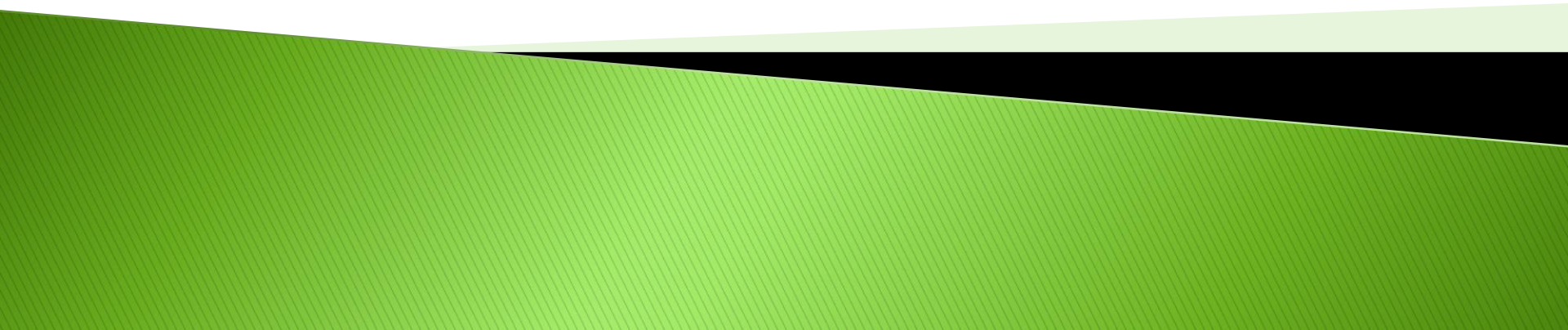
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Agenda

- ColCoMa – The starting point
- CuCoMaG
 - Tasks and implementation
 - Game
 - Group reflection tool
- Future directions

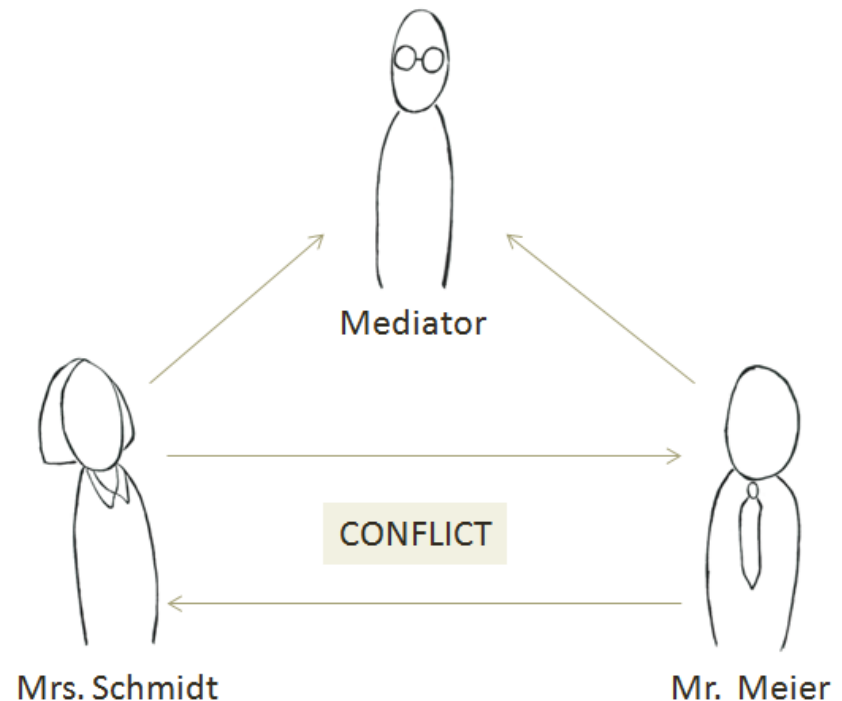
ColCoMa

The starting point



Concept

- Application for training conflict management
- Collaborative virtual environment
- Multi-player
- Chatbot-support



CuCoMaG

Tasks and implementation

Tasks

- Game
 - Find field of application
 - Develop & implement a new scenario
- Group reflection tool
 - Develop & implement a group reflection application

Tasks and implementation

Game client



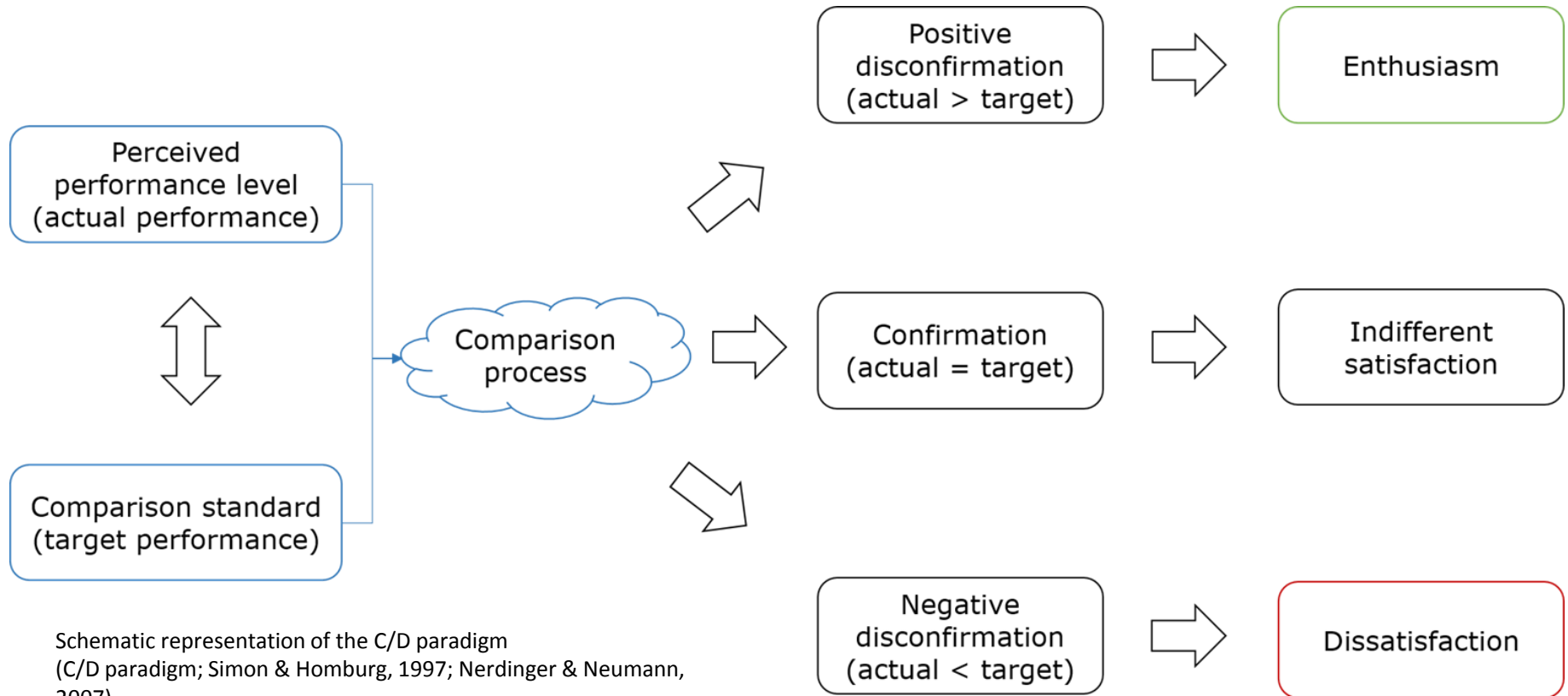
Field of application

Field of application

- Why customer complaint management?
 - To restore customer satisfaction (Hippner & Wilde, 2007, Chapter 2)
 - Important criterion for successful customer relationships
 - Customer satisfaction influences the customers...
 - Cognitions (attitudes, confidence..)
 - Behaviour (recommendation rate, repurchase behaviour..)
 - Is a relevant factor for determining the success of a company
 - Main goal for every company which wants to be successful

Field of application

- Mechanisms behind customer dissatisfaction



Schematic representation of the C/D paradigm
(C/D paradigm; Simon & Homburg, 1997; Nerdinger & Neumann, 2007)

Field of application

- Kinds of complainants

	Objective reason for complaint is existent	Objective reason for complaint is not existent
Submission of complaint	Active complainant	Troublemaker
No submission of complaint	Unvoiced complainer	Satisfied customer

- Complaining with an objective reason
 - A functional solution can be found
 - Relatively easy to handle compared to troublemakers

Field of application

- Different customer type

	Objective reason for complaint is existent	Objective reason for complaint is not existent
Submission of complaint	Active complainant	Troublemaker
No submission of complaint	Unvoiced complainer	Satisfied customer

- Complaining without an objective reason
 - Subjective experience of high dissatisfaction
 - Angry customer wants to vent their anger

Concept

Concept

- Single player
- Divided from group reflection
- Both applications time independent

Player: Employee



Chatbot: Customer



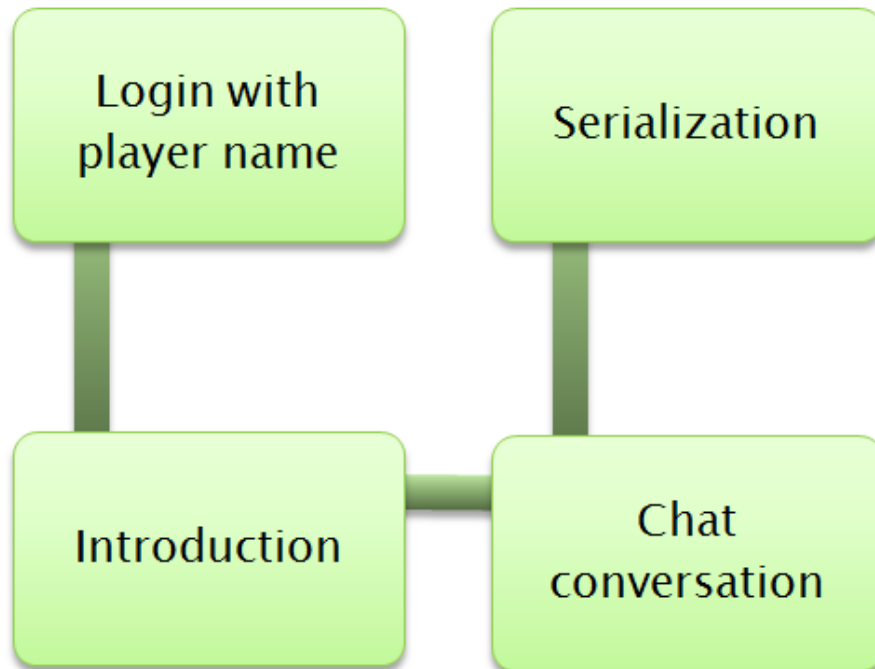
Group reflection



Process

Process

Game client

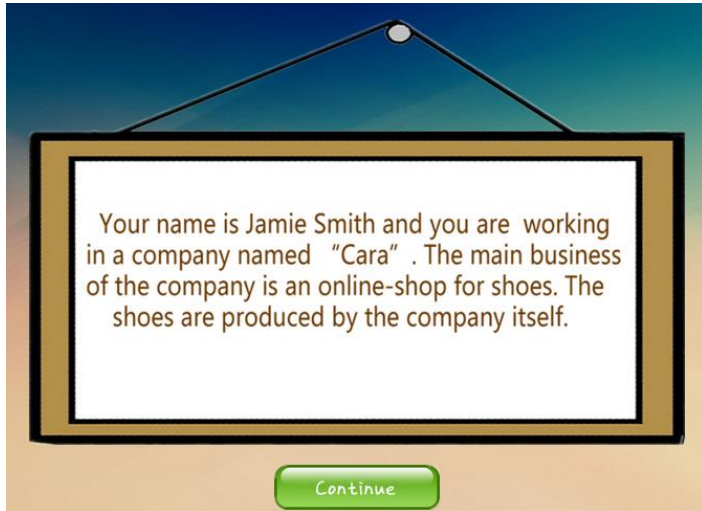


Group reflection application



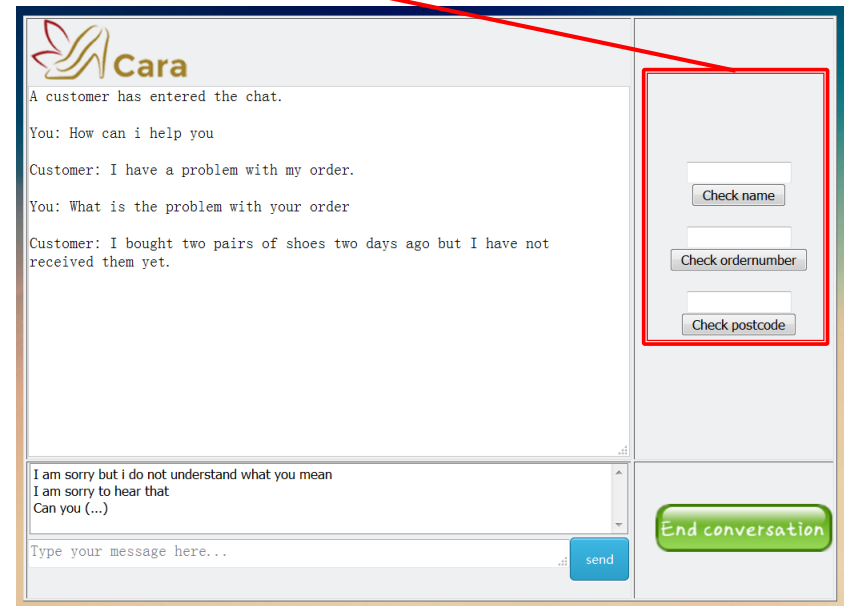
Implementation

Game client features



Introduction text introduces scenario and game functionality to player

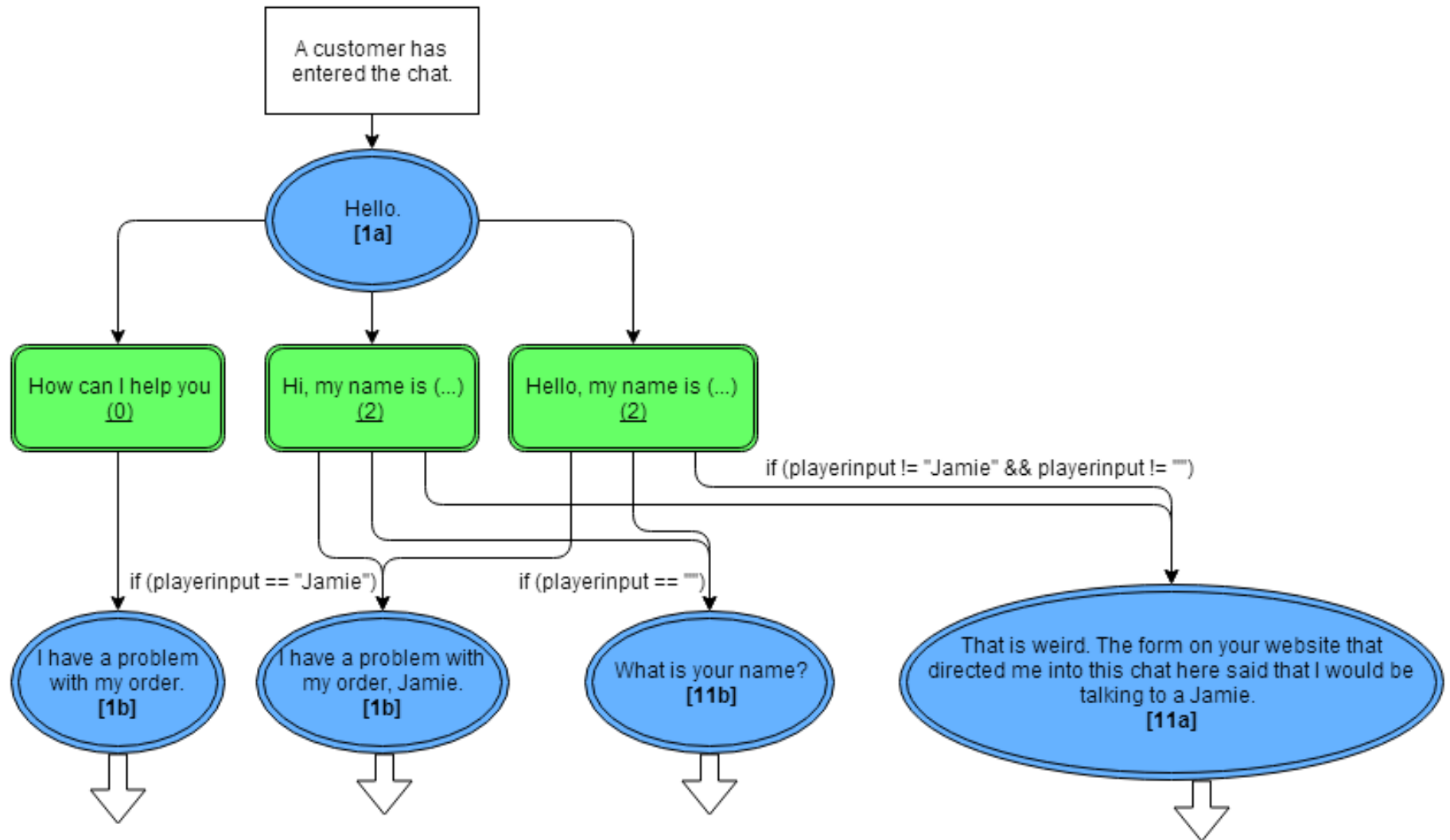
Search functionality to find information about customer/order



Chat environment for conversation with customer

Implementation

Model dialogue



AIML

Chatbot: Customer

- **Artificial Intelligence Markup Language**
- Controls bot behavior in chat environment
- Sentence openers → interpret players intentions
- “random” reactions to same input
- Triggers → work around passive chatbot style
(silence trigger)
- C# library: AIMLbot



Game client interface

Structure & Layout

HTML 5

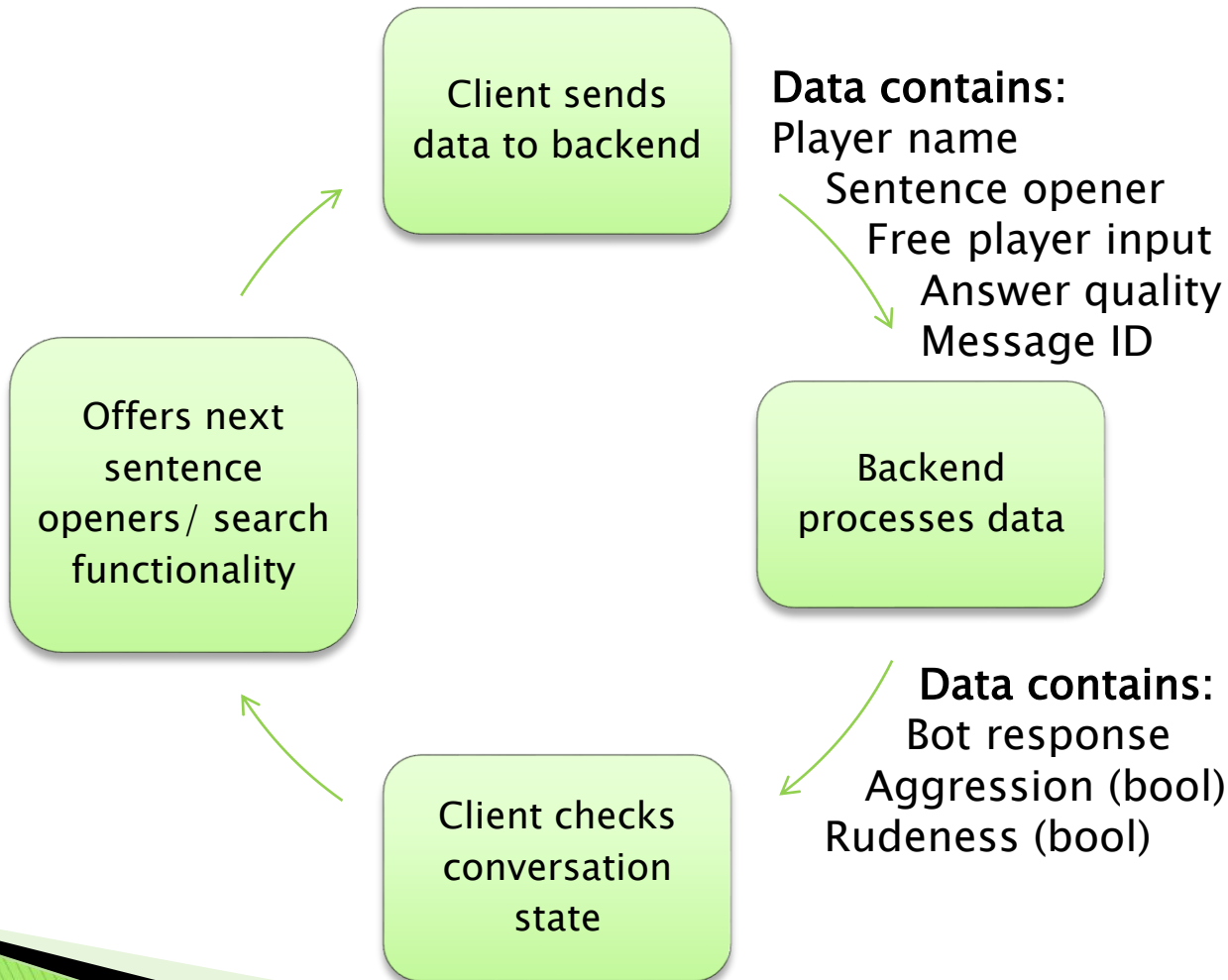
Design

CSS 3

Functionality,
dynamic
manipulation of UI,
Communication
with backend

JavaScript

Client to backend to client



Implementation

Multi-agent architecture

Multi-agent architecture

Client:



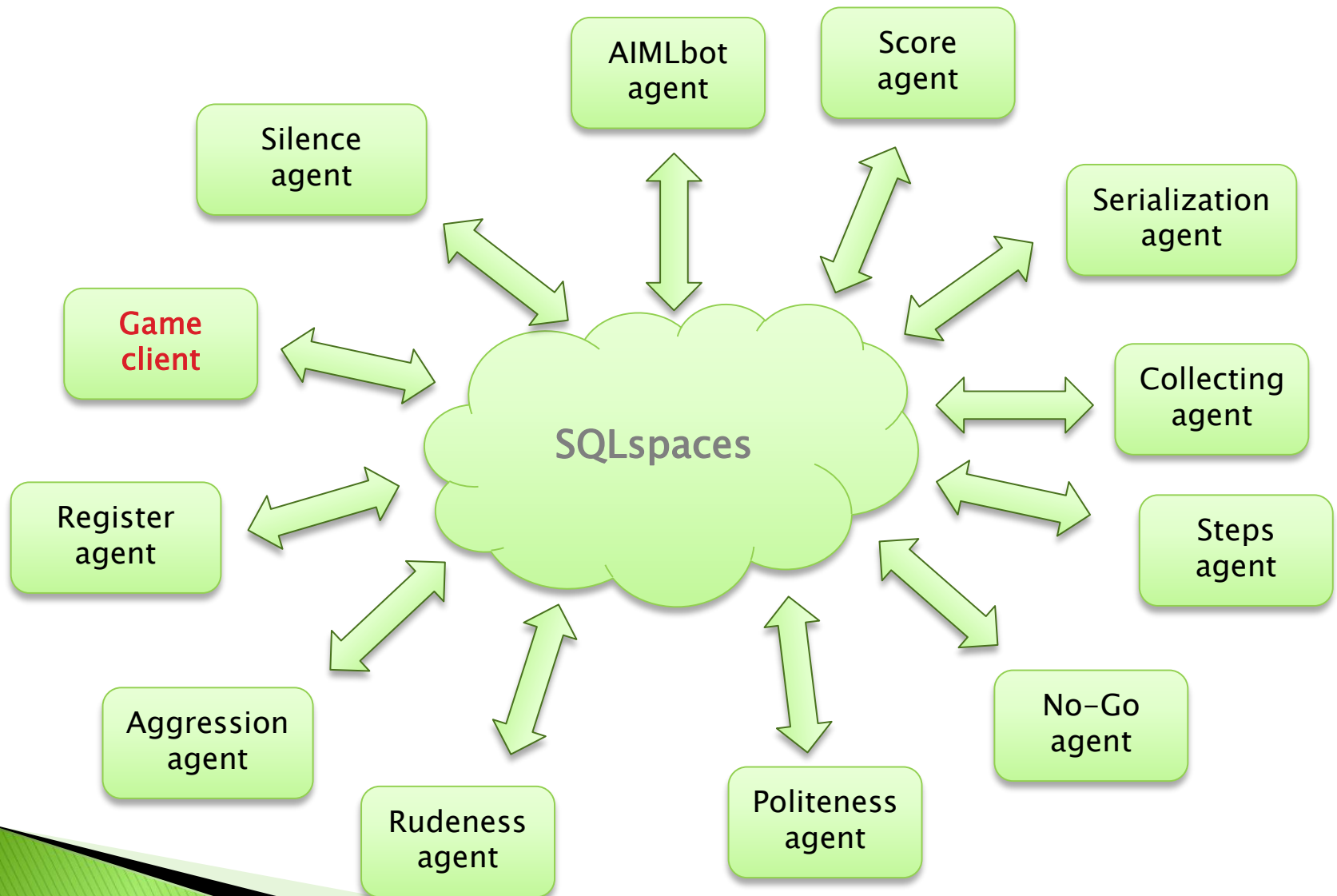
Agents:



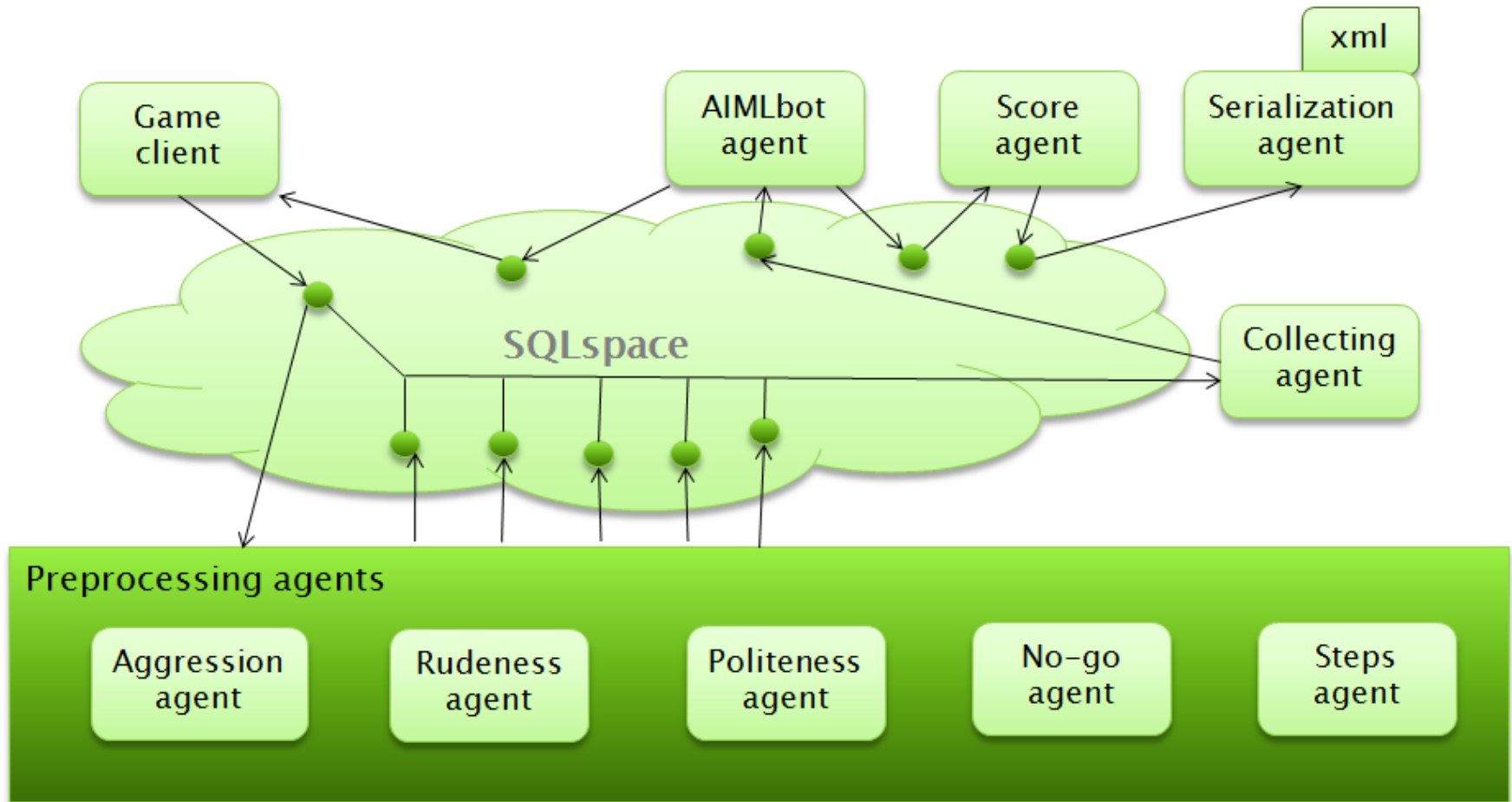
Score:



Agents



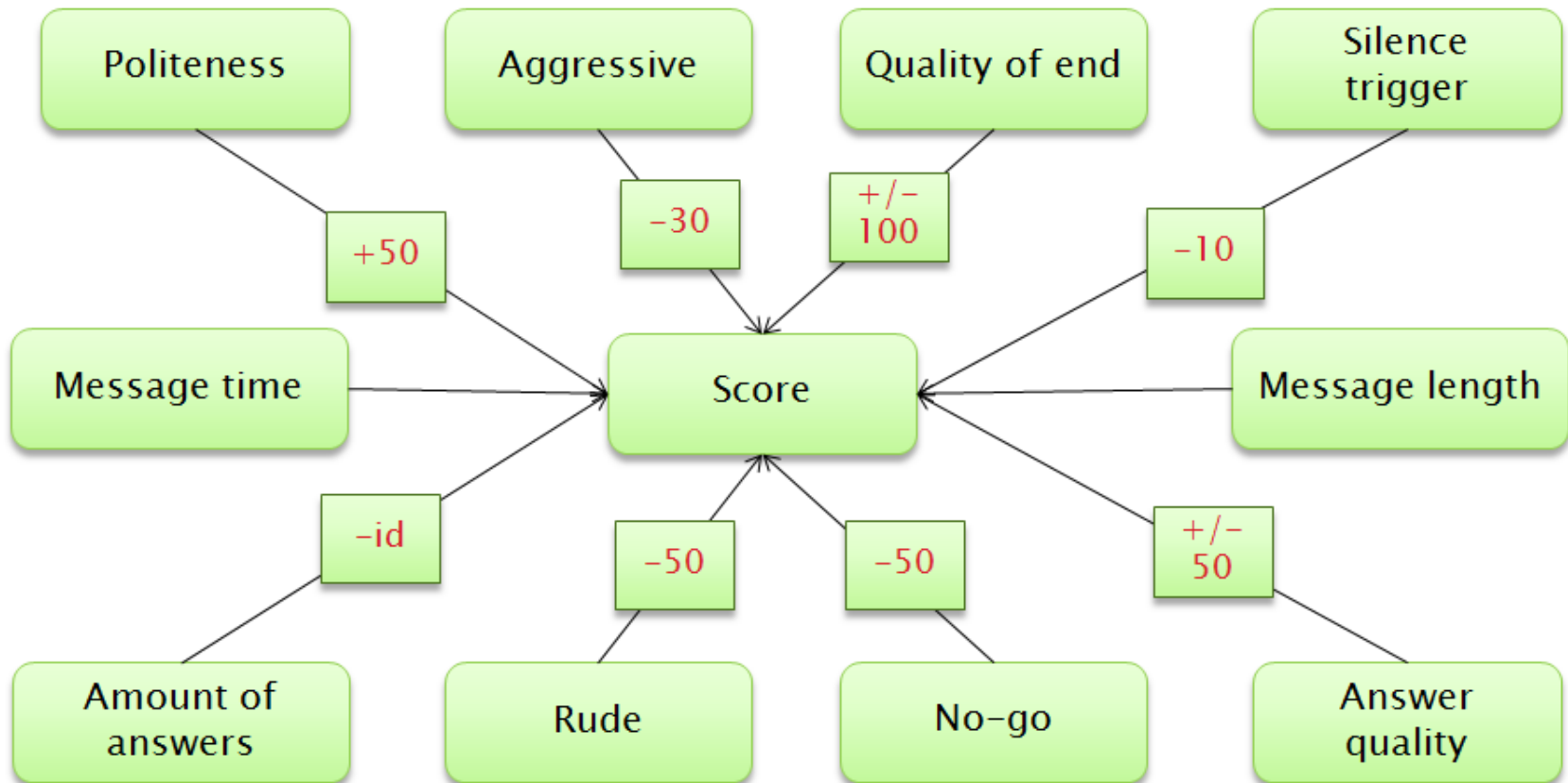
Multi-agent architecture



Implementation

Scoring system

Score calculation



Demo

Game

Tasks and implementation

Group reflection tool



Concept

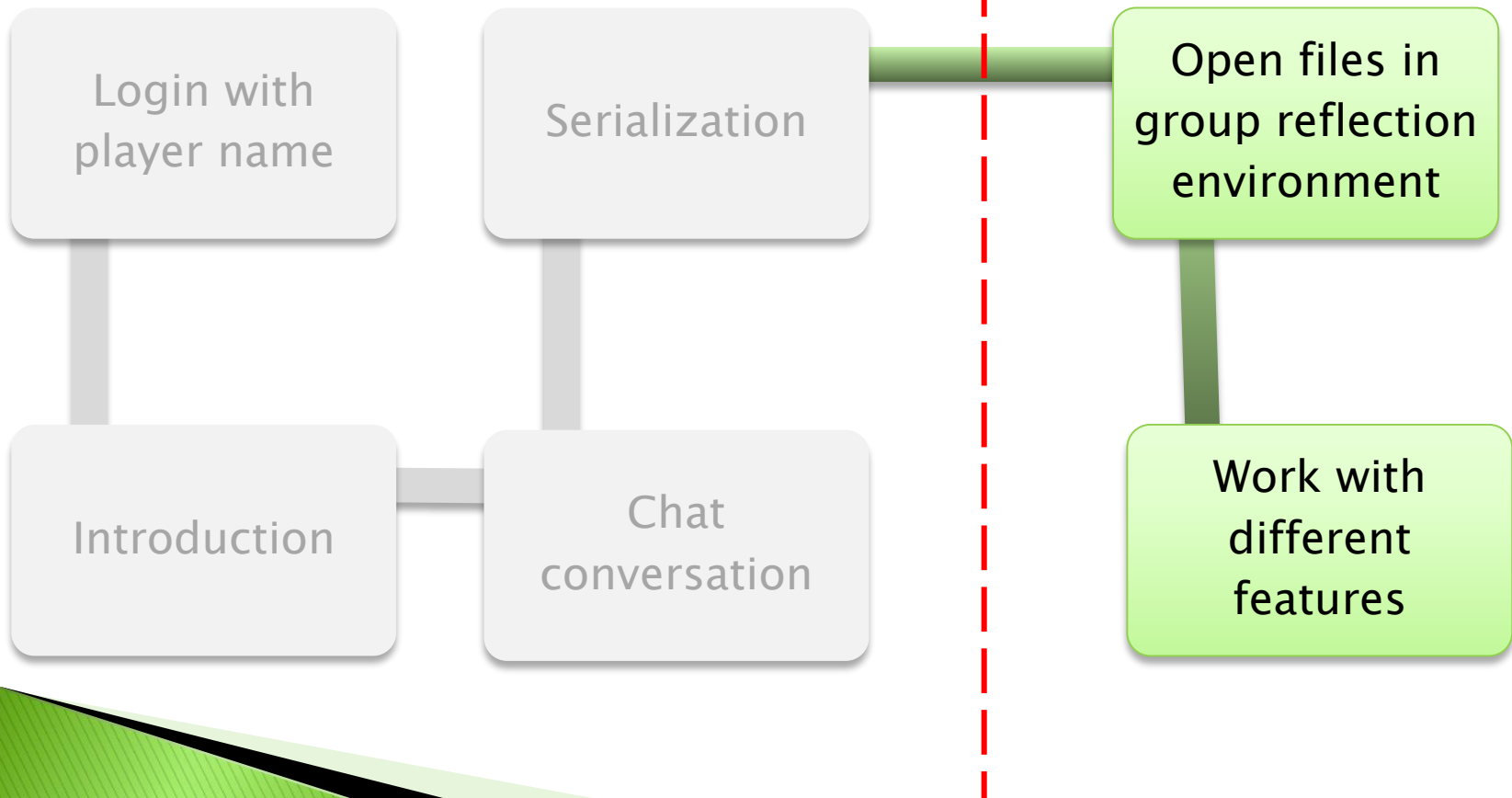
- Dashboard design
- Game and group reflection not in series
- Lead by a trainer/ expert
- Tool = technical support



Process

Game client

Group reflection
application



Features & options

Compare
different
players

Notepad

Different
visualizations

View
conversation

Interactive
graph

Demo

Group reflection

Implementation

Group reflection interface

Structure &
Layout

HTML 5

Design

CSS 3

Functionality

JavaScript / JQuery

Graph

Highcharts (JS-API)

Notepad

NiceEditor (JS-API/Flash)

Future directions



Future directions

- Implementing more scenarios
- Polishing design
- Usability test
- Field test

Thank you for your attention!

Questions?



References

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