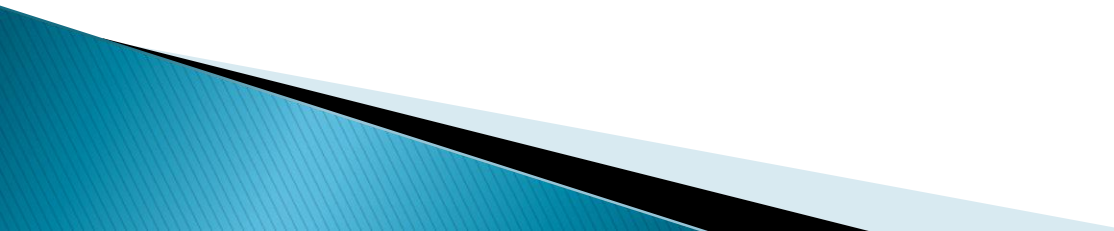# Distributed social network
better protection for users' data

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Agenda

- State of the art

- Current problems of data security

- Possible solution

- Assumptions

- General architecture

- Evaluation of the project

Where are we now?

- Various services
- Various destination market
- Centralized model
- Huge amount of data
- One service supplier

Risks and benefits

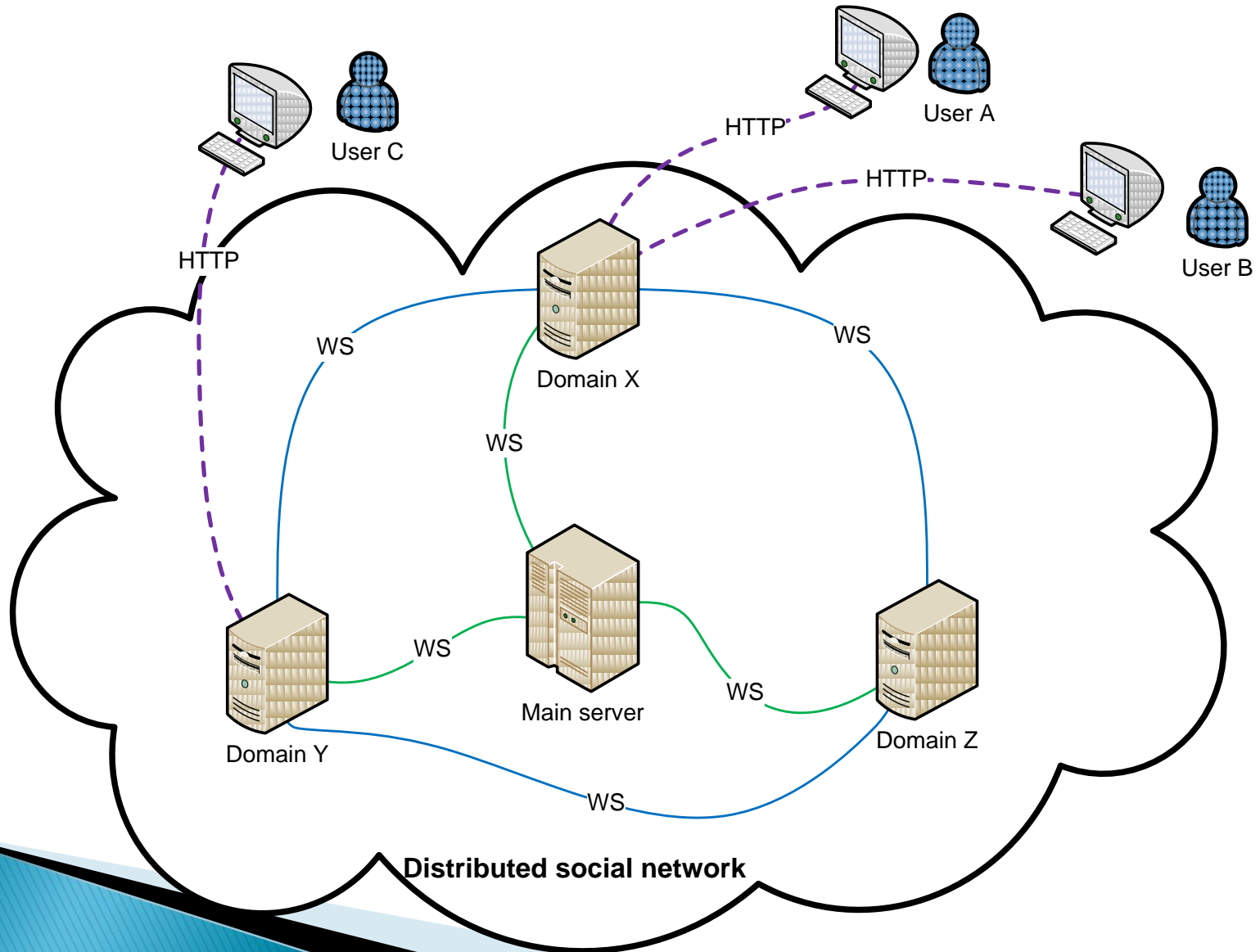| Supplier	User
▸ All users' data in possession	▸ Data security issues
▸ Benefits of data processing	▸ One source of services
▸ Maximizing benefits of targeted advertising	▸ No easy method of contacts portability
▸ Defines terms of service usage	▸ Only one secutity policy and terms of service
▸ Law	

Possible solution

- Distributed data storage and processing
- Cloud of social networks
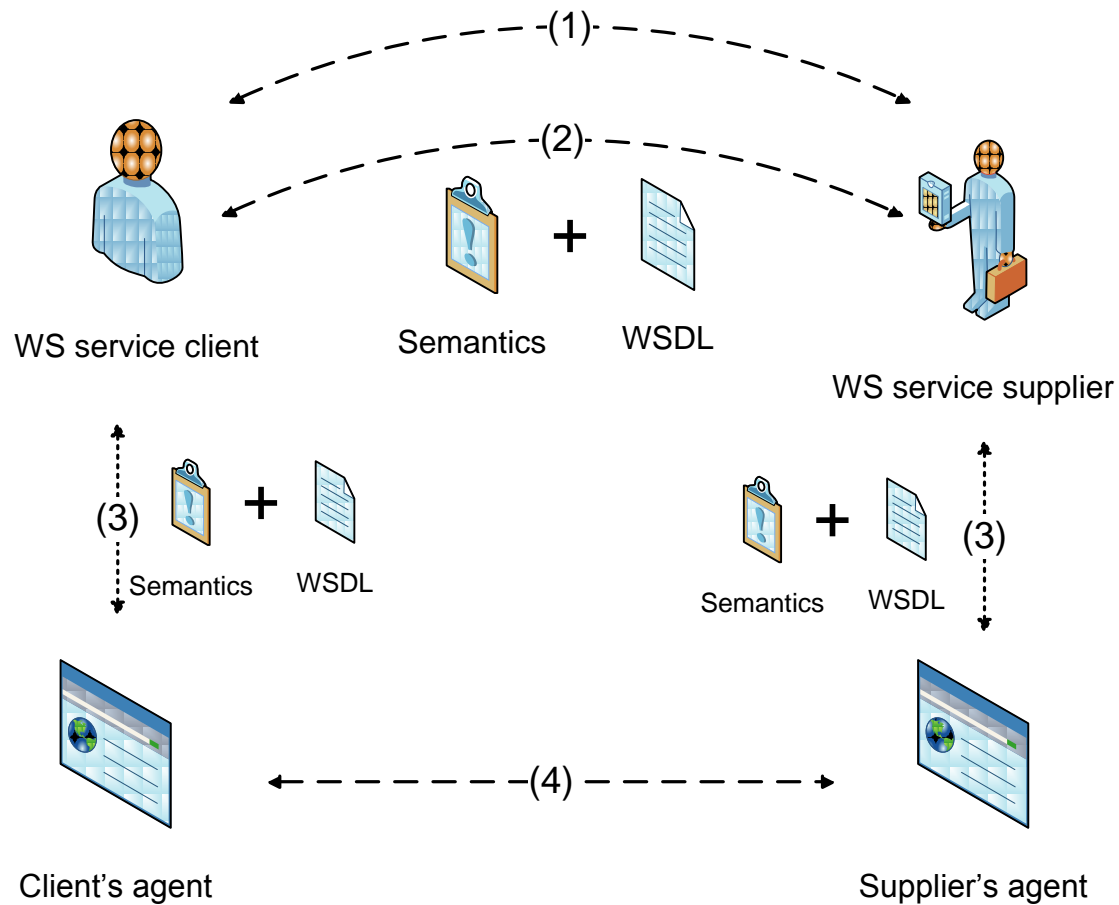- Various suppliers
- Various terms of service
- Various functions

Standardization required!

General architecture

User C

User A

User B

HTTP

HTTP

HTTP

HTTP

WS

WS

WS

Domain X

WS

WS

WS

Main server

Domain Y

Domain Z

WS

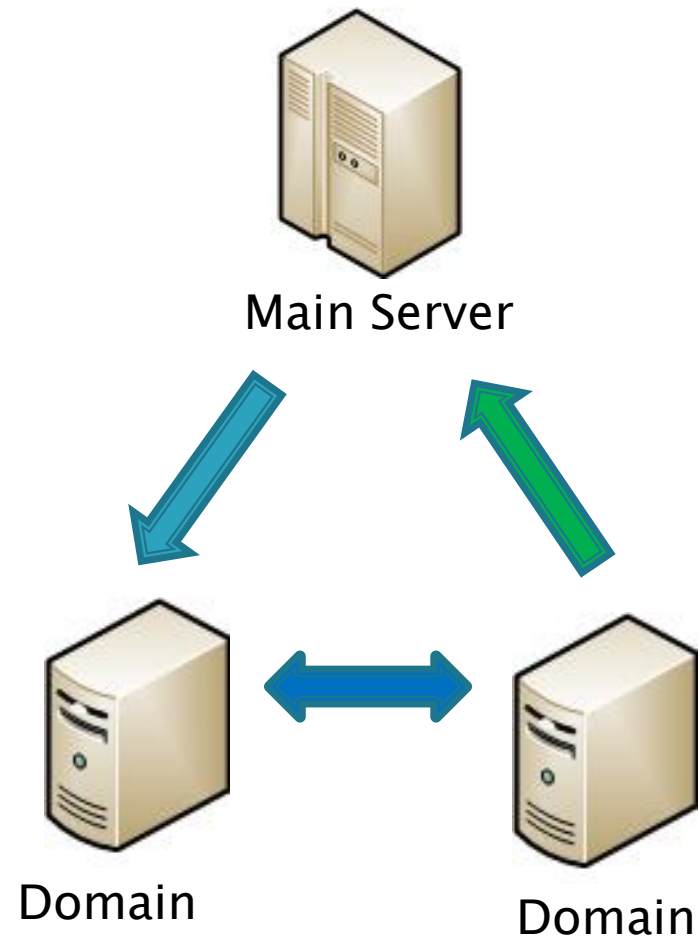**Distributed social network**

Web services

Web service interfaces
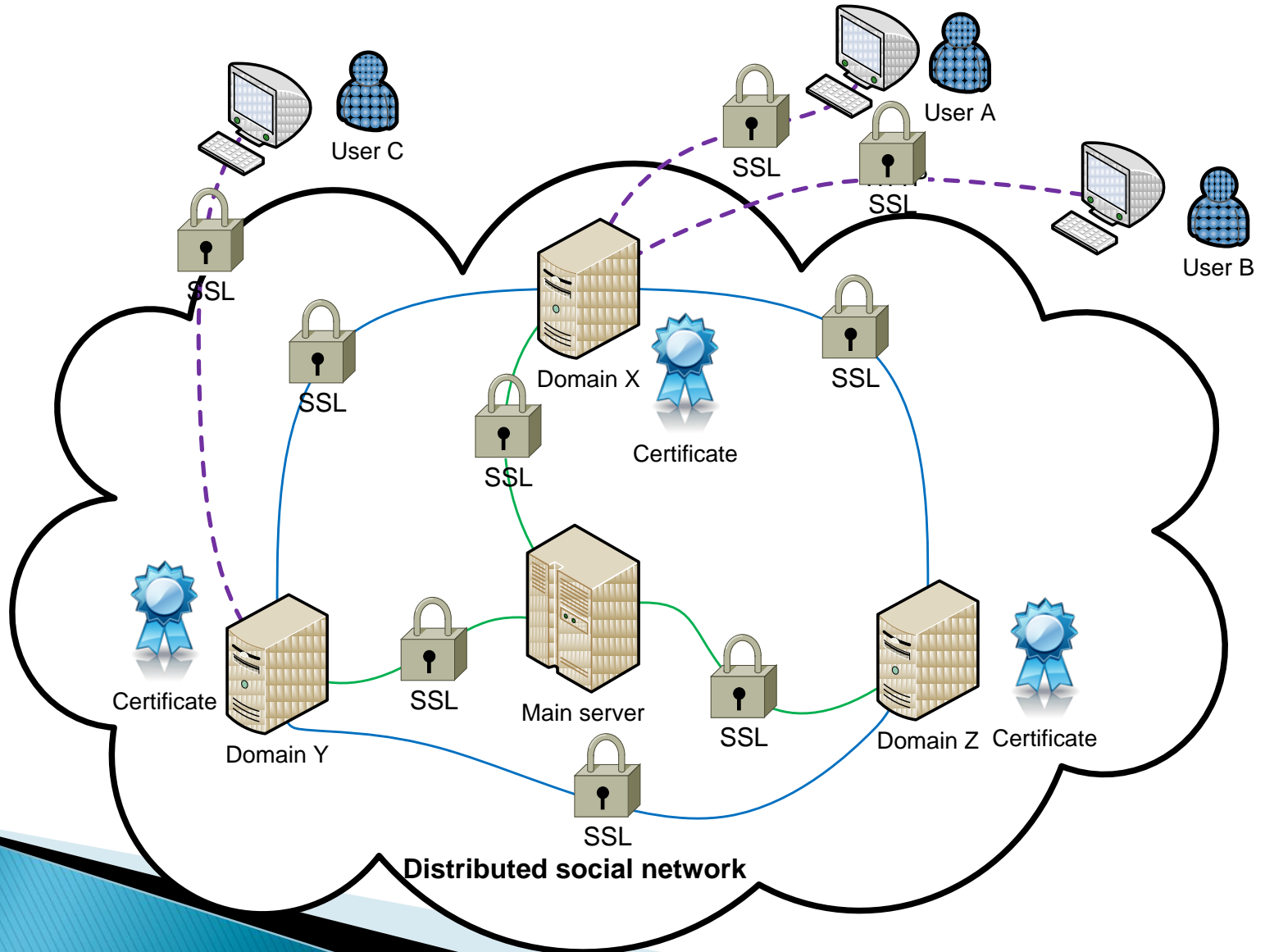
- **Main server**
  - searchUser
  - updateUser
  - getUserDetails
- **Domain**
  - getUserData
  - sendMessage
  - getUserStatuses
  - sendInvitation
  - invitationResponse
  - getAllUsersToSearch

Main Server

Domain

Domain

Security architecture

Distributed social network

General benefits

- User can choose a domain
- Dedicated domains
  ◦ Various functions
- Architecture forces security level
- Competitive market (domains)
- Systems integration
- Scalable solution

Security benefits

- Various physical locations for data storage

- Various administrators
  - Outside sharing policies
  - Different trust levels

- Various security policies

Implementation

- Web application– **PHP5 + mysql**

- Interfaces – **Web Services**

- Server – **Apache**

- Identity check – **X.509 certificates**

Applications

- Worldwide social network

  ◦ Various functions

  ◦ Micro domains

- Company network

  ◦ Departments diversity

- Academic network

  ◦ Project workgroups

Future development

▸ Hierarchy of main servers

▸ More web services – more functions

▸ File transfer

▸ Regresive compatibility

▸ Migration of contacts

Thank you
for your attention

Questions…