Mental Distance
and Its Implications for the Design of Software and Data

Welcome!

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dmarca@email.phoenix.edu

July 24, 2010
Important Note

• Case study is: www.dooce.com.

• It is an excellent social network.

• One of the best for showing the traditional perspective of design.

• The author wishes www.dooce.com much continued success!

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July 24, 2010
Mental distance is a measure of the conceptual similarity between the underlying intention of:
1) a social network conversation
2) an online ad.

Long distance = poor ad alignment.

Short distance = good ad alignment.
Given this definition of mental distance… the language-action perspective can give business:

1) access to small, dynamic niche markets occurring in social networks,

2) a way to create highly aligned online ads for those markets.
Mental Distance

and Its Implications for the Design of Software and Data

Part 1 – Prolog

- Social Networks
Mental Distance

and Its Implications for the Design of Software and Data

Part 1 – Prolog

Part 2 – Traditional Perspective

- Populations
- Connections
- Conversations
- Long Distance
Mental Distance
and Its Implications for the Design of Software and Data

Part 1 – Prolog
Part 2 – Traditional Perspective
Part 3 – Alternate Perspective
  • Inference
  • Intention
  • Clusters
  • Short Distance
Mental Distance

and Its Implications for the Design of Software and Data

Part 1 – Prolog
Part 2 – Traditional Perspective
Part 3 – Alternate Perspective
Part 4 – Software Implications
  ● Architecture
  ● Ontology
  ● History
  ● Agents
Mental Distance

and Its Implications for the Design of Software and Data

Part 1 – Prolog
Part 2 – Traditional Perspective
Part 3 – Alternate Perspective
Part 4 – Software Implications
Part 5 – Epilog

● Semantic Web Fit
Mental Distance
and Its Implications for the Design of Software and Data

Part 1 – Prolog

• Social Networks
1. Social Networks

Some Early Social Network Sites

Launch Dates of Major Social Network Sites

- Six Degrees.com (1997)
- BlackPlanet (1999)
- MicGente (1999)
- Ryze (2000)
- Friendster (2002)
- Couchsurfing (2003)
- Flickr, Piczo, Mixi, Facebook (founded only)
- Dodgeball, Ca.mO (site renamed)
- Couchsurfing (2005)
- YouTube, Xanga (site renamed)
- Bebo (site renamed)
- Facebook (high school networks)
- AsianAvenue, BlackPlanet (relaunch)
- Facebook (corporate networks)
- Cyworld (U.S.)
- MyChurch, Facebook (everyone)

Kasavanna, 2009
1. Social Networks

Exponential Growth 2003 to 2008

Launch Dates of Major Social Network Sites

- Six Degrees.com '97
- LiveJournal '98
- BlackPlanet '99
- M匀ante '00
- Ryze '01
- Friendster '02
- Couchsurfing '03
- MySpace '03
- Last FM '03
- Hi5 '03
- Friendster, MySpace, Mixi, Facebook (renamed in 2004)
- Dodgeball, Camfrog (SNS renamed in 2004)
- Hyves '04
- YouTube, Xanga (SNS renamed in 2004)
- Bebo (SNS renamed in 2004)
- Facebook (high school networks)
- Asian Avenue, BlackPlanet (re-launched)
- Facebook (corporate networks)
- Gyworld (U.S.)
- MyChurch, Facebook (everyone)

Cha, 2009

Growth in "Social Network" US Patent Applications

250% per year growth

Source: USPTO

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Mental Distance

and Its Implications for the Design of Software and Data

Part 1 – Prolog
Part 2 – Traditional Perspective

- Populations
- Connections
- Conversations
- Long Distance
2. Populations

Facebook = 4th Largest Population in the World

Launch Dates of Major Social Network Sites

- Six Degrees.com
- LiveJournal
- BlackPlanet
- Migi
- Ryze
- Friendster
- Flickr, Piczo, Mixi, Facebook (stand-alone)
- Dodgeball, Ciao21 (stand-alone)
- Hyves
- YouTube, Xanga (stand-alone)
- Bebo (stand-alone)
- Facebook, BlackPlanet (stand-alone)
- Facebook (high school network)
- AsianAvenue, BlackPlanet (stand-alone)
- MySpace.com

Scale, 2008
2. Populations

Case Study: www.dooce.com ... affluent U.S. Mothers

A monolog on work-life balance.

January 4, 2010
3. Connections

Typical Structures, Complex, Hard to Analyze

- Core – Periphery
- Cliques
- Watts-Strogatz (friends)
- Scale Free

Freeman, 2000
3. Connections

Example: Twitter “Followers” Network

A Twitter “Followers” Relationship Network

Hopkin, 2010
3. Connections

Example: Twitter “Following” Network

A Twitter “Followers” Relationship Network

A Twitter “Following” Relationship Network

Hopkin, 2010
4. Conversations

Example: Twitter “Conversation” Network

A Twitter “Followers” Relationship Network

A Twitter “Following” Relationship Network

A Twitter Conversation Network

Hopkin, 2010
An early morning lecture in semantics

“Can I have my treat after I finish my Cocoa Puffs?”

“I think we need to have a long talk about what you define as a treat.”

January 4, 2010
4. Conversations

Hard to Classify: Many, Varied Conversations

January 4, 2010

- Baby
- Music
- Fatherhood
- Exercise
- Journals
- Breakfast
4. Conversations  

Simple Search Organization? ... May Not Work

Breakfast is missing (word not in title)

January 4, 2010
<table>
<thead>
<tr>
<th>MARKETING STRATEGIES</th>
<th>MARKETING ATTRIBUTES</th>
<th>Techniques</th>
</tr>
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<tbody>
<tr>
<td>Mass Marketing</td>
<td><strong>Product</strong></td>
<td><strong>Target</strong></td>
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<tr>
<td></td>
<td>Simple</td>
<td>All consumers</td>
</tr>
<tr>
<td>Direct Marketing</td>
<td>Stratified</td>
<td>Segments</td>
</tr>
</tbody>
</table>

Laudon, 2004
5. Long Distance

Case Study: Ads Match Profile, Not Conversation

A monolog on work-life balance.

Books

Movie

Hair Spray

January 4, 2010
### 5. Long Distance

**Generalize → Segment → Poor Ad Alignment …**

<table>
<thead>
<tr>
<th>MARKETING STRATEGIES</th>
<th>Product</th>
<th>MARKETING ATTRIBUTES</th>
<th>Target</th>
<th>Pricing</th>
<th>Techniques</th>
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<tbody>
<tr>
<td><strong>Mass Marketing</strong></td>
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<td>All consumers</td>
<td>One nation, one price</td>
<td>Mass media</td>
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<tr>
<td><strong>Direct Marketing</strong></td>
<td>Stratified</td>
<td></td>
<td>Segments</td>
<td>One price</td>
<td>Targeted communications, e.g., mail and phone</td>
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<tr>
<td><strong>Micromarketing</strong></td>
<td>Complex</td>
<td></td>
<td>Micro-segments</td>
<td>Variable pricing</td>
<td>Segment profiles</td>
</tr>
</tbody>
</table>

Laudon, 2004
5. Long Distance  

Case Study: Ads Not Aligned to Breakfast

- Hair Spray
- Movie
- Books

January 4, 2010
5. Long Distance

Case Study: **One** Breakfast Ad … Poor Alignment

January 4, 2010
Mental Distance
and Its Implications for the Design of Software and Data

Part 1 – Prolog
Part 2 – Traditional Perspective
Part 3 – Alternate Perspective
- Inference
- Intention
- Clusters
- Short Distance
6. Inference

Case Study: Here is a conversation...

An early morning lecture in semantics

“Can I have my treat after I finish my Cocoa Puffs?”

“I think we need to have a long talk about what you define as a treat.”

January 4, 2010
An early morning lecture in semantics

"Can I have my treat after I finish my Cocoa Puffs?"

"I think we need to have a long talk about what you define as a treat."

Horvitz, 1999
“Can I have my treat after I finish my Cocoa Puffs?”

“I think we need to have a long talk about what you define as a treat.”

Ghani, 2002
“Can I have my treat after I finish my Cocoa Puffs?”

“I think we need to have a long talk about what you define as a treat.”

Andrews, 2005
Inference Engine

Meaning

An early morning lecture in semantics

"Can I have my treat after I finish my Cocoa Puffs?"

"I think we need to have a long talk about what you define as a treat."

Ehrlich, 2007
“Can I have my treat after I finish my Cocoa Puffs?”

“I think we need to have a long talk about what you define as a treat.”

Banks, 2002
<table>
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<tr>
<th>7. Intention</th>
<th>Three Types...</th>
</tr>
</thead>
<tbody>
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<td></td>
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</tr>
</tbody>
</table>

Heidegger, 1962
7. Intention

*Intention for Being*, Declaration: say who you are

Being

Self

Healthy Child
7. Intention

**Intention for Acting**, Goal-oriented: do what you say

<table>
<thead>
<tr>
<th>Being</th>
<th>Acting</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthy Child</td>
<td>Correct Diet</td>
<td></td>
</tr>
<tr>
<td>Self</td>
<td></td>
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</tbody>
</table>

Sabatar, 2002
7. Intention

**Intention for Having**, Possession-oriented: get results

<table>
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</thead>
<tbody>
<tr>
<td>Healthy Child</td>
<td>Correct Diet</td>
<td>Healthy Cereal</td>
</tr>
</tbody>
</table>

Self | Others | Things

Recker, 2005
7. Intention

*Intention for Acting* is context for *Intention for Having*

- **Being**
  - Healthy Child

- **Acting**
  - Correct Diet

- **Having**
  - Healthy Cereal

- **Self**
- **Others**
- **Things**

*Heidegger, 1962*
8. Clusters

A Conversation Cluster Creates an Intention

Bergstrom, 2009
8. Clusters

Conversation 1: Articulating Need

Cohen, 2002
8. Clusters

Conversation 2: Forming “Right” Relationships

Need → Relationship → Need

Wang, 2004
8. Clusters

Conversation 3: Creating Possibilities

- Need
- Relationship
- Possibility

Denning, 2003
8. Clusters

Conversations 4: Determining Opportunities

Need

Relationship

Possibility

Opportunity

Denning, 2003
8. Clusters

Conversation 5: Making Decisions

Diagram showing the relationship between need, relationship, possibility, and decision.
8. Clusters

Conversaion 6: Taking Appropriate Action

Winograd, 1998
<table>
<thead>
<tr>
<th>Marketing Strategies</th>
<th>Product</th>
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<td>Complex</td>
<td>Micro-segments</td>
<td>Variable pricing</td>
<td>Segment profiles</td>
</tr>
<tr>
<td>Personalized, One-to-one</td>
<td>Highly complex</td>
<td>Individual</td>
<td>Unique pricing</td>
<td>Individual profiles</td>
</tr>
</tbody>
</table>

Laudon, 2004
9. Short Distance  

#1. Declare an *Intention for Being* to Social Network

Being  

- Need
- Action
- Decision
- Opportunity

Healthy Child

Acting  

- Relationship

Having  

Self  

Others  

Things

Backstrom, 2006
#2. Group Agrees Upon an *Intention for Acting*

- **Being**: Healthy Child
- **Acting**: Correct Diet, Need, Decision, Opportunity, Relationship, Possibility
- **Having**: Things

- **Self**: Healthy Child
- **Others**: Correct Diet, Need, Decision, Opportunity, Relationship, Possibility
- **Things**: Healthy Child, Healthy Child, Correct Diet, Need, Decision, Opportunity, Relationship, Possibility

*Hill, 2006*
9. Short Distance  #3. Group Agrees Upon an *Intention for Having*

<table>
<thead>
<tr>
<th>Being</th>
<th>Acting</th>
<th>Having</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self</td>
<td>Others</td>
<td>Things</td>
</tr>
</tbody>
</table>

- Healthy Child
- Correct Diet
- Need
- Action
- Healthy Cereal
- Decision
- Relationship
- Opportunity
- Possibility

-Praise, 2008-
9. Short Distance

(Note Match with Classical Marketing-Sales Process)

<table>
<thead>
<tr>
<th>Being</th>
<th>Acting</th>
<th>Having</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self</td>
<td>Others</td>
<td>Things</td>
</tr>
<tr>
<td>Healthy Child</td>
<td>Correct Diet</td>
<td>Need</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Loyalty</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Preferred</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Healthy Cereal</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Purchase</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Function Feature</td>
</tr>
</tbody>
</table>

Ren, 2003
#4. Group Agrees Upon Product Preferences

- **Being**
  - Healthy Child

- **Acting**
  - Correct Diet

- **Having**
  - Healthy Cereal
    - nutrients
    - no sugar
    - will eat

**Self**

**Others**

**Things**

Kamaladevi, 2010
### 9. Short Distance

<table>
<thead>
<tr>
<th>#5. Products are Matched to Preferences</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Image of various breakfast cereals]</td>
</tr>
<tr>
<td>![Image of various breakfast cereals]</td>
</tr>
<tr>
<td>![Image of various breakfast cereals]</td>
</tr>
<tr>
<td>![Image of various breakfast cereals]</td>
</tr>
</tbody>
</table>

- **nutrients**: ✓ ✓ ✓ ✓ ✓ ✓
- **no sugar**: ✓ ✓ ✓ ✓ ✓ ✓
- **will eat**: ✓ ✓ ✓ ✓ ✓ ✓

*Fiss, 2007*
9. Short Distance

#6. Ad Alignment: Consistency, Relevance, Branding

January 4, 2010
Mental Distance
and Its Implications for the Design of Software and Data

Part 1 – Prolog
Part 2 – Traditional Perspective
Part 3 – Alternate Perspective
Part 4 – Software Implications
  ● Architecture
  ● Ontology
  ● History
  ● Agents
10. Architecture

#1. Parse: Conversation → Word Neighborhoods

- Conversation
- Natural Language Processing
- Phrases

Mayfield, 2003
10. Architecture

#2. Infer: Word Neighborhoods $\rightarrow$ Possible Intent

Diagram:

- Conversation
- Natural Language Processing
- Phrases
- Inference Engine: Intention
- Possible Intentions

Lee, 2001
10. Architecture #3. Infer: Possible Intent → Verified *(Shared)* Intent

Conversation

Natural Language Processing

Phrases

Inference Engine: Intention

Possible Intentions

Analysis: Confirm Shared Intent

Verified Intention

Paek, 2000
10. Architecture

#4. Tag: Verified *(Shared)* Intent → Niche Market

- Conversation
- Natural Language Processing
- Phrases
- Inference Engine: Intention
- Possible Intentions
- Analysis: Confirm Shared Intent
- Verified Intention
- Inference Engine: Niche Market
- Niche

Hunscher, 2006
10. Architecture #5. Connect: Niche Market → Preferences → Ads

```
Conversation

Natural Language Processing

Phrases

Inference Engine: Intention

Possible Intentions

Analysis: Confirm Shared Intent

Verified Intention

Inference Engine: Niche Market

Niche

Inference Engine: Preferences → Ads

Aligned Ads
```

Hogg, 2009
10. Architecture

#6. Ad ➔ Click ➔ Collective Bargaining ➔ Purchase

- Conversation
  - Natural Language Processing
    - Phrases
      - Inference Engine: Intention
        - Possible Intentions
          - Analysis: Confirm Shared Intent
            - Verified Intention
              - Inference Engine: Niche Market
                - Niche
                  - Inference Engine: Preferences ➔ Ads
                    - Aligned Ads
                      - Agent: Collective Bargaining
                        - Purchase

Lin, 2010
11. Ontology

“Conversation” and Its Types + Their Elements

TYPES:
- Need
- Relationship
- Possibility
- Opportunity
- Decision

ACTION

ELEMENTS:
- Request
- Promise
- Offer
- Counter
- ...

Weigand, 2008
11. Ontology

“Intention” and Its Types + Elements (for e-Business)

- Types:
  - Being
  - Doing
  - Having

- Elements:
  - Intent to Buy
  - Product
  - Preferences
  - Order
  - Pricing
  - …

Natural Language Processing

Phrases

Inference Engine: Intention

Possible Intentions

Analysis: Confirm Shared Intent

Verified Intention

Inference Engine: Niche Market

Niche

Inference Engine: Preferences → Ads

Aligned Ads

Agent: Collective Bargaining

Purchase

Barbosa, 2005
11. Ontology

Shared Intent, Agreement, Grounded Understanding

**DIMENSIONS:**
- Intent
- Agreement
- **UNDERSTANDING**

**ELEMENTS:**
- Utterance
- Presentation
- Acceptance
- Confirmation
- …

Paek, 2000
11. Ontology

Marketing Mix Approach Elements are Intention-based

MARKETING MIX:
- Product
- Pricing
- Distribution
- COMMUNICATION

ELEMENTS:
- Agents (understand each niche market’s intentions)
- Bundle (built for one intended use)
- Ads (High Alignment)
- Brand Equity (product function = intended use)
- …

Engelbach, 2006
11. Ontology

Content-based Access using Intentions + Distances

**ACCESS TO:**
- Product Catalogs
- Yellow Pages

**LIMITED BY:**
- Constant Updates
- Rigid Set of Terms
- Large Vocabulary

**SOLUTION:**
- **Vocabulary:**
  terms = Intentions
- **Relationships:**
  semantics among terms = distances between intentions

Guarino, 1999
11. Ontology

Intentions = Non-Ambiguous Preferences Mapping

MAPPING:
- Buyer preferences
- Seller preferences
- Intention-based map

NEGOTIATION:
- Non-ambiguity
- Use intentions in the Yellow Pages and Catalogs

BEYOND PRICE:
- Satisfy Need...
- Satisfy Intended Use

Beam, 1996
Reuse: Words Neighborhoods → Intentions

**WORDS...**
- Assumptions
- Inter-relationships
- Collections

**CONTEXT:**
- Specific Topic
- The Conversation

**CAUTION:**
- Generic Associations
- Prior attempts to use those assumptions without success.

Craven, 2000
11. History

Reuse: Contexts + Phrases → Intentions

Context = Breakfast

1) Treat → Sugar
2) No Treat → No Sugar
3) No Sugar → Health

CAUTION:
Reasoning under uncertainty is likely.

Paek, 1999
11. History

Build: Self-Organizing Map of “Similarity Distances”

Word Neighborhoods → Natural Language Processing → Conversation Ontology

Intention Networks → Inference Engine: Intention → Intention Ontology

Intention Distances → Analysis: Confirm Shared Intent → Interaction Ontology

Verification of Intentions → Inference Engine: Niche Market → Niche Market Ontology

Verified Intention → Inference Engine: Preferences → Ads → Online Ad Ontology

Aligned Ads → Agent: Collective Bargaining → Negotiation Ontology

Purchase

HEALTH

01. WELL-BEING

03. WELLNESS

07. VITALITY

12. FITNESS

18. STRENGTH

Chen, 2002
11. History

Use: Intention (Short Distance) → More Preferences

- Nutrients
- No Sugar
- Will Eat

01. WELL-BEING
- Vitamins
- Omega-3

Cohen, 2000
11. History

Organize: Taxonomy + Configuration + Preferences

- Word Neighborhoods
- Intention Networks
- Intention Distances
- Niche Markets
- Product Catalogs
- Natural Language Processing
- Phrases
- Inference Engine: Intention
- Possible Intentions
- Analysis: Confirm Shared Intent
- Verified Intention
- Inference Engine: Niche Market
- Niche
- Inference Engine: Preferences \(\rightarrow\) Ads
- Aligned Ads
- Agent: Collective Bargaining
- Purchase
- Conversation
- Conversation Ontology
- Intention Ontology
- Interaction Ontology
- Niche Market Ontology
- Online Ad Ontology
- Negotiation Ontology

CEREAL

- Nutrients
- No Sugar
- Small Size
- Will Eat

Brafman, 2007
Buchner, 1999

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11. History

Negotiation Success + Strategic Delay $\rightarrow$ Low Cost

- **Word Neighborhoods**
- **Intention Networks**
- **Intention Distances**
- **Niche Markets**
- **Product Catalogs**
- **Purchase Negotiations**

**Natural Language Processing**

**Inference Engine: Intention**

**Possible Intentions**

**Analysis: Confirm Shared Intent**

**Verified Intention**

**Inference Engine: Niche Market**

**Niche**

**Inference Engine: Preferences $\rightarrow$ Ads**

**Aligned Ads**

**Agent: Collective Bargaining**

**Conversation Ontology**

**Intention Ontology**

**Interaction Ontology**

**Niche Market Ontology**

**Online Ad Ontology**

**Negotiation Ontology**

Mok, 2005

Winoto, 2002
13. Agents

<table>
<thead>
<tr>
<th>Tran, 2000</th>
<th>Internet</th>
<th>Extranet</th>
<th>Intranet</th>
<th>Information</th>
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<tbody>
<tr>
<td>Social Network</td>
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</tr>
<tr>
<td>Product Company</td>
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</tr>
</tbody>
</table>

Hybrid = Knowledge Base + Collaborative Filtering
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Guttman, 1998</td>
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<tr>
<td>Social Network</td>
<td></td>
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<tr>
<td>Product Company</td>
<td></td>
</tr>
</tbody>
</table>

Diagram:
- Internet
- Extranet
- Intranet
- Information

- Public Catalog
- CI Agent
- Public Offering
- Configuration Experts
- Private Catalog

Red arrows indicate the flow of information.

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<table>
<thead>
<tr>
<th>13. Agents</th>
<th>Knowledge Base: Similar Products + Configurations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tran, 2000</td>
<td>Internet</td>
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Diagram:
- Public Catalog
- CI Agent
- Configuration Experts
- Competitive Information
- Recommendation
- Public Offering
## 13. Agents

<table>
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<th>Varian, 2010</th>
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<th>Information</th>
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<tr>
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<td><img src="image" alt="Diagram" /></td>
<td><img src="image" alt="Diagram" /></td>
<td><img src="image" alt="Diagram" /></td>
</tr>
<tr>
<td>Intention Agent</td>
<td>Online Ads</td>
<td>Preferences</td>
<td>Public Catalog</td>
<td><img src="image" alt="Diagram" /></td>
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<tr>
<td>Niche Agent</td>
<td><img src="image" alt="Diagram" /></td>
<td><img src="image" alt="Diagram" /></td>
<td>Public Offering</td>
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<tr>
<td>Intention + Preferences</td>
<td><img src="image" alt="Diagram" /></td>
<td><img src="image" alt="Diagram" /></td>
<td>Competitive Information</td>
<td>Private Catalog</td>
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<td>Ad Click</td>
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<td><img src="image" alt="Diagram" /></td>
<td>Recommendation</td>
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</table>

**Buy Step 1: Ad → Conversation for Having → Prefs.**

![Diagram](image)
13. Agents

Buy Step 2: Preferences → Vendors + Their Channels

Pavlou, 2006

<table>
<thead>
<tr>
<th>Internet</th>
<th>Extranet</th>
<th>Intranet</th>
<th>Information</th>
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<tr>
<td><img src="image-url" alt="Diagram of agents and information flows" /></td>
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</table>

- **Internet**:
  - Intention Agent
  - Niche Agent
  - Online Ads
  - Preferences

- **Extranet**:
  - CI Agent
  - Recommendation
  - Competitive Information

- **Intranet**:
  - Channel Agent
  - Configuration Experts

- **Information**:
  - Public Catalog
  - Public Offering

Social Network

Product Company

- **Company Agent**
- **Selection**
- **Ad Click**
- **Intention + Preferences**
### 13. Agents

#### Buy Step 3: Use Successful Negotiation Strategies

<table>
<thead>
<tr>
<th>Lee, 1998</th>
<th>Internet</th>
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<th>Intranet</th>
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<td>Bargaining</td>
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</table>

| Product Company | | | | |
| Company Agent | Channel Agent | Competitive Information | Recommendation | Private Catalog |
| | | | | |

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13. Agents

Buy Step 5: Publish Previously Non-public Configs.

Dubrovsky, 1991

Social Network

Internet

- Intention Agent
  - Intention + Preferences
  - Ad Click
  - Online Ads

Extranet

- Niche Agent
  - Preferences
  - Private Offerings
  - Successful Strategies

Intranet

- Bargaining

Information

- Public Catalog
- Purchase Negotiations

Product Company

- Company Agent
  - Private Offering
  - Configuration Need

- Channel Agent
  - Competitive Information
  - Recommendation

- CI Agent
  - Public Offering

- Configuration Experts
  - Private Catalog

Dubrovsky, 1991

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Mental Distance
and Its Implications for the Design of Software and Data

Part 1 – Prolog
Part 2 – Traditional Perspective
Part 3 – Alternate Perspective
Part 4 – Software Implications
Part 5 – Epilog
  ● Semantic Web Fit
14. Semantic Web Fit  
Message + Transport Layers

<table>
<thead>
<tr>
<th>Web Services Stack</th>
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<tr>
<td>WS Security</td>
</tr>
<tr>
<td>SOAP</td>
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<tr>
<td>HTTP, FTP, SMTP, ...</td>
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Yu, 2008
14. Semantic Web Fit

**Semantic-driven Computation: Intention + Distance**

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**Web Services Stack**

<table>
<thead>
<tr>
<th>WS Security</th>
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<td>HTTP, FTP, SMTP, ...</td>
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**Extensions**

Bussler, 2002
14. Semantic Web Fit

**Auto Service Composition:** Catalogs + Yellow Pages

<table>
<thead>
<tr>
<th>Web Services Stack</th>
<th>Extensions</th>
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<tr>
<td>UDDI</td>
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Kajan, 2004
Ontology-driven Profiling: Intention → disambiguation → niche preferences → pinpoint ads → simple discovery.

<table>
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<tr>
<th>Web Services Stack</th>
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<td>2. Product Yellow Pages</td>
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<td>XML Messaging</td>
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<td>Transport</td>
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Parkhomenko, 2003
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Medjahed, 2003
Mental Distance
and Its Implications for e-Business Software

Thank you!

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July 24, 2010
References


References

Smith, I., et. al. (1998). Designing conversation policies using joint intention theory. 3rd Int. Conf. on Multi Agent Systems.