Towards Automated Contract Formation for Electronic Value-added Services — Analysis of the Swiss Federal Law on Private International Law

Martin Waldburger

Department of Informatics IFI, Communication Systems Group CSG, University of Zürich
# Outline

- Motivation
- Key Issues
- Contracting Focus
- Research Methodology
- IPRG Structure
- International Contract Claims
- Connecting Factors
- Applicable Law, B2B Case
- Jurisdiction, B2C Case
- Challenges and Solutions
- Summary, Conclusions, and Ongoing Work

<table>
<thead>
<tr>
<th>Towards</th>
<th>Subject matter</th>
<th>Methodology</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Technical</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Economic</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Legal</td>
<td></td>
</tr>
<tr>
<td>Automated</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Contract</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Formation</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Electronic Value-added Services</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Analysis</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Swiss Federal Law</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Private International Law</td>
<td>x</td>
<td></td>
</tr>
</tbody>
</table>

© 2009 UZH, IFI
Motivation

„The Terms, and your relationship with Google under the Terms, shall be governed by English law. You and Google agree to submit to the exclusive jurisdiction of the courts of England to resolve any legal matter arising from the Terms. Notwithstanding this, you agree that Google shall still be allowed to apply for injunctive remedies (or an equivalent type of urgent legal relief) in any jurisdiction.“

„If any court of law, having the jurisdiction to decide on this matter, rules that any provision of these Terms is invalid, then that provision will be removed from the Terms without affecting the rest of the Terms. The remaining provisions of the Terms will continue to be valid and enforceable.“

http://www.google.com/accounts/TOS?hl=en
Key Issues

Contract parties (identity, applicable geographic location, contact details)

Language (contract and communications)

Validity (offer, contract duration)

Offerings (goods, services, main characteristics)

Price and terms (price, delivery, costs, payment)

Warranty, after-sales service, termination, remedies

Restrictions (conditions of purchase, geographic/time restrictions)

Dispute resolution (applicable law, jurisdiction, alternative dispute res.)

Focus:
Determine applicable law, jurisdiction automatically

Consequence:
• Formalize private international law procedures
• Collect connecting factors

Approach:
Example of Swiss law (IPRG) given

adapted from International Chamber of Commerce guide for eContracting (http://www.iccwbo.org/policy/law/id3670/index.html)
Contracting Focus

- Communication service
- Value-added service
- (Material) Goods

- Two-party contracts
- Multi-party contracts

- Intra-national contracts
- International contracts

- Public law
- Private law
- Penal law

- Pre-concluded
- Automated contract formation

Sparse related work

B2C and B2B

Connecting factors

Private international law

Jurisdiction, applicable law
Research Methodology

Socio-Technical System: International business transactions in relation to electronic value-added services in the Internet involving a service provider and a service customer

Action System: Formalization method and formal representation of activities to determine jurisdiction and applicable law in automated way according to Swiss IPRG

Construction

Abstraction of Intentional

Design Artefact: Activity diagrams for automated determination of jurisdiction and applicable law according to Swiss IPRG

Conceptual Framework: Method to analyze and model further national and international private international law sources based on identified thematic topics

Formal Language: UML Activity Diagram

Natural Language

Purpose: Analyze and model Swiss IPRG in order to gain transaction cost optimizations through automation

Hypothesis: Lowered overall business transaction costs by means of altered risk assessment due to legal compliance in determining jurisdiction and applicable law

Adequacy Test

Conformity Test

- Research object
- Epistemological Contribution
- Representation
- Abstract Knowledge Contribution
- Justification Criterion
- Knowledge Contribution
- Justification Procedure

© 2009 UZH, IFI
International Claims
Connecting Factors

Basic connecting factors

<<decisionInput>>

b1: Contract party is a natural person (20, 21)

b3: Registered office is available from a corporation's articles of incorporation (21)

<<decisionInput>>

b10: Habitual residence is in that nation in which a party lives for a longer time, even though that time span might be limited in the first place (20)

b11: Establishment is in the nation of a party's center of commercial activities (20)

b12: Domicile is in the nation of a corporation's registered office according to the corporation's articles (21)

b13: Domicile is in the nation where a corporation is effectively administered (21)

<<postcondition>> Basic connecting factors are known

b14: [no]

b16: [no]

b20: Domicile is the same nation as that of habitual residence (20)

b28: Domicile is in that nation in which a party stays with intent to permanent residence (20)

b29: Establishments are in the nation of domicile or in the nations of branch offices (21)

b27: Party stays in a nation with intent to permanent residence (20)

b21: [yes]

b22: [yes]

b25: [yes]
Jurisdiction, B2C Case (2)

j1: Contract of a performance of customary consumption for personal or familial use of a consumer, not in relation to professional or commercial activities of that consumer (114, 120, 149)

j6: [yes]

j11: Provider accepted order in nation in which consumer has habitual residence (120)

j13: [yes]

j14: [no]"
Challenges and Solutions

Direct formalization...

... does not reduce complexity

... does not scale

... does not substantially improve legal certainty

... still requires human interference

... does not yield a single jurisdiction, applicable law

→ Hypothesis-based Approach
→ Group-wise handling

Reservations, consumer, contractual freedom, remaining clauses (case-by-case)
Summary, Conclusions, and Ongoing Work

- Automated contract formation for value-added services
  - Jurisdiction, applicable law
  - According to Swiss private international law (IPRG)
  - Risk assessment as motivation

- Highly challenging, no obvious solution
  - Lowered complexity
  - Focus on frequent cases (assumptions, B2C, B2B)
  - Generalize where possible (grouping)

- Ongoing work
  - Information model, workflow model
  - European viewpoint (Lugano, Brussels, Rome)
  - Implementation
Thank you for your attention!

Questions, comments...