How Technology Shapes Legal - Now Semantics

Vienna, 13 September 2018

The energy for a better life. **OMV**

When code became law ... sort of

In cyberspace, code is a new regulator.

Lawrence Lessig, Code and Other Laws Of Cyberspace (1999, 2006)

Why is that?

▶ Differently than in nature **the architecture of cyberspace – e.g. the Internet – is determined by code**

▶ Code **creates and transforms everything into everything** imaginable

▶ Code is the first layer regulating **access, usage and content integrity**

▶ **Internet is a cyberspace → also a digital company is!**
   ▶ Digitalization gradually moves the company into cyberspace
   ▶ **What we code is what we get**

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Why us lawyers need to understand code

- **We need to understand the digital company architecture** because only then we can fully embrace its governance
  - **'Understanding Code' is** not learning to program code, but understanding **its effects**

- **Setup of digital companies**
  - Layer 1: code (workflows, interfaces, access rights, integrity measures)
  - Layer 2: real world processes
  - Layer 3: content (including regulations of Layers 1 and 2)

- **Challenges if we do not understand Layer 1**
  - Will your Corporate IT always get the point when structuring Layer 1?
  - Will you're your Controlling/Finance departments be exclusively responsible for Internal Control Systems?

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While code is law, data is king!

- **Semantic applications will be only as strong as the content basis**
  - We need to understand the **value of corporate data** found **beyond** the legal department repos

But data aggregation is not that easy – why?

- **Contrary to Finance/Controlling, there is no mandatory data structure**
  - Bookkeeping requirements aggregate financial data in a structured and uniform way → **this is perfect for AI applications**
  - For semantic applications, we first need to set up a similarly structured basis → **but according to our own rules**

- Only such structured data can be **tagged intelligently and linked into context (RDF – Resource Description Framework)**

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Our roles in digital semantics

▶ **First, a key role in data governance seems reasonable**

  ▶ Access to data

  ▶ Permissible usage of data: third-party intellectual property rights, labor law, GDPR restrictions

  ▶ On top: industry-specific data regulation

▶ **Secondly, we need to understand that only structured corporate data let Semantic Applications shine**

  ▶ A pool of diligently aggregated data is the key to performant applications

▶ **In all related governance topics, us lawyers are native speakers**

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Our roles in digital semantics (2)

▶ **Because legal language often faces high levels of ambiguity**

  ▶ Vagueness: *"Good"* (good meal, good person, good car)

  ▶ Semantic ambiguity: *"We saw her duck."*

  ▶ Syntax ambiguity: *"To get in, you will need an entrance fee of $10 **or** your voucher **and** your drivers' license."*

    examples taken from wikipedia.com

▶ **Semantic applications, enriched by corporate data, will have the ability to overcome such ambiguities and continuously learn on them**

▶ **Legal reasoning → a core semantic application**

  ▶ Any legal tech tool must reason its decisions reached by code (white box)

  ▶ **We are there to check and understand**

  ▶ No black box scenario of 2nd generation machine learning

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Where semantic apps need to be careful

▶ **What drives us to excel in our jobs***

  ▶ purpose ✓

  ▶ mastery ✓ ✓

  ▶ autonomy ✓ x (any IT application has to care!)

  * David Pink - Drive: The Surprising Truth About What Motivates Us (2011)

▶ **How digital transparency can hit autonomy**

  ▶ "good transparency": addressing secretiveness and information hoarding

  ▶ "questionable transparency": introducing micro-management by monitoring and analyzing work through data

Semantics for legal departments

- **Translation software based on semantic machine learning**
  - high quality base translations for further refinement
  - continuously learning on the "corporate slang"

- **Building blocks for contract standards**
  - "Lego for contracts" – Prof. Breidenbach
  - adjust to context, e.g. differences in contractual definitions
  - automated creation/clearance of license rights – dalicc.net

- **Automated FAQs for repetitive inhouse legal advice**
  - feeding Q&As into chatbots
  - getting rid of the repetitive, sometimes quite boring questions

- **In short: Applications that enable us focusing on the important stuff!**

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