MULTI-LINE INSURANCE CLASH MANAGEMENT

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General Trends

- Cyber Insurance is growing and becoming more complex
- InsurTechs are changing the role of technology in Insurance
- Consumer preferences are shifting
- Property Casualty market is becoming more expensive
- Emerging Markets are growing
- Insurance has a growing role in disaster resilience

Information courtesy of PwC, Lloyds, BI Intelligence Estimates and Morgan, 2015.

Concerns Within the Insurance Industry

- Un-modelled risk and uncertainty
  - i.e. Liability
- Understanding more complex and interconnected risk
  - Inconsistent terminology
  - Clash risk
  - High value single location aggregation risk
  - Single policyholder aggregation risk
- Limited communication across sectors

The Need for Consistency: Global Exposure Accumulation and Clash Project

- Open standard
- Cover most classes of insurance
- Standardized framework
- Support data interchange
- Accumulation risk modelling
- Clash model analysis

What Exists Already?

**Data Exchange Standards**
- ACORD Standards
- Lloyd's Target Operating Model
- The British Standards Institution (BSI)
- International Organization for Standardization (ISO)
- United Nations Economic Commission for Europe: XML Naming and Design Rules

**Property/NatCat Modeling**
- Risk Management Solutions (RMS)
- AIR Worldwide
- OASIS Loss Modelling Framework

**Liability Risk Modeling**
- Arium Risk Architecture
- Praedicat

**Agriculture Risk Modeling**
- AgRisk

**Policy Administration Systems**
- Russell Group ALPS System
- NIIT Technologies Advantage Suite
- Xuber Xposure (Previously OpenXposure)
Lines of Insurance: Exposure

Property

Commercial Property
- BI
- Energy
- Marine
- Aviation

Specialty
- Cyber
- Agriculture
- Terrorism, War & Political Risk
- Financial Credit & Surety
- Other

Casualty Liability

Liability
- GL
- Professional (E&O)
- Medical Malpractice
- D&O
- Environmental
- Workers Comp

Personal Accident

Group Personal Accident

Auto

Group Auto

$10,000 Trillion

Distribution of $105 Quadrillion
($105,000 Trillion)
Insured Exposure Worldwide

Aggregate limits, Asset value under management

No specific limit for compulsory auto 3rd party liability; average upper limits assumed

Estimated total insured exposure values, aggregate limits
Pension asset value under management

To Scale
- Physical Damage
- Duty of care 3rd party
- Injury, illness or death
- Financial Asset Devaluation
- Revenue Loss Business Interruption
- Digital asset loss (cyber)
## V1.0 Schema

<table>
<thead>
<tr>
<th>Phase 0 (Existing Schemas)</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
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<tbody>
<tr>
<td>- Commercial Property</td>
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<td>- Political Risk and Security</td>
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<td>- Residential Property</td>
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<td>- Workers Compensation</td>
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<td>- Casualty Liability</td>
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<td>- Health</td>
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<td>- Group Accident</td>
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Schema Development Process

- Divide into manageable blocks of information
- Series of dictionaries
- Identification of similarities and patterns across different classes of insurance.
- Incorporate common practice for as much of the market as possible
  - Identify translations and equivalences in terminology and concepts.
- Exercise in anthropology
The Consultation Numbers:

715
Articles, Reports and Journals

130
Industry Stakeholders

27
Insurance Organizations

11
Modellers and Analysts
Global Exposure Accumulation and Clash V1.0: A Uniform Platform for Understanding Exposure

Challenges and Solutions for Enterprise Exposure Risk Management

*Insurance Applications Beyond Property Classes*

- September 6, Judge Business School, Cambridge
- Data Definitions V1.0 launch event
- Please contact K.strong@jbs.cam.ac.uk to request invitation

<table>
<thead>
<tr>
<th>Provisional Order of Events</th>
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<tr>
<td>Welcome</td>
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<tr>
<td>Managing All Lines of Insurance Exposure</td>
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<tr>
<td>Industry Perspective 1: Market Facilitation / Regulator</td>
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<tr>
<td>Industry Perspective 2: Enterprise Exposure Management Primary</td>
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<td>Industry Perspective 3: Enterprise Exposure Management Reinsurer</td>
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<tr>
<td>Tea Break</td>
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<tr>
<td>Multi-line Insurance Exposure Data Definition Document v1.0</td>
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<tr>
<td>Clash Scenarios - Three examples</td>
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<tr>
<td>Where Next?</td>
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<tr>
<td>Panel Discussion: Managing Enterprise Exposure</td>
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<td>Closing Remarks</td>
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<td>Networking reception</td>
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