

Have Your Data Management Best Practices Changed to Reflect Data Management in the 21st Century?

CAS RPMS – Chicago – March 2010

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Agenda

- Background Information
- Data
- Uses
- Strategies and Plans
- Summary
- Open Discussion/Questions

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Panelists

- Art Cadorine, ISO
- Pete Marotta, ISO
- Tracy Spadola, Teradata

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Background Information

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A Look Back

- 1343: first formal policy written in Italy
- 1494: double entry bookkeeping established
- 1726: Sun Fire Office established
- 1736: Union Fire (Ben Franklin) established
- 1779: standard marine policy established
- 1792: states started to impose limitations on company activities and investments
- 1824: NY established a tax on premiums
- **1828: Annual Statement concept is created in NY with 13 categories of questions**
- 1850: A & H coverage in US
- 1851: states start insurance company examinations
- **1853: NY annual report expanded requires more data**
- 1871: Lloyds established
- **1871: National Convention of Insurance Commissioners (NCC) - fire and marine blank**
- 1873: MA adopts first standard fire policy
- 1898: auto liability coverage
- 1899: auto collision coverage
- 1902: auto property damage coverage
- 1911: first workers' comp policy
- 1911: NCK: model reserve law
- **1922: National Council on Compensation Insurance established**
- **1922: NY law requires insurers to file premiums and loss experience in conformance with approved classifications**
- **1923: NY requires Casualty Experience Exhibit**
- 1944: South East Underwriters case
- **1945: McCarran Ferguson enacted by Congress**
- **1948: states pass regulations/laws regarding statistical plans, rates and rules**
- **1949: Insurance Expense Exhibit introduced**
- **1950: NAAC adopts multi-line blank**
- 1967: ACOHD formed to create standardized operational forms
- 1969: Schedule P changed to calendar/accident year basis
- 1971: ISO formed from several national insurance service organizations
- 1983: Insurance Value Added Network (IVANS): first batch processing via IVANS
- 1995: EU directive on data protection
- 1996: HIPAA and FCRA passed by Congress
- 1996: Solvency II in EU
- 1966: Graham-Leach-Bliley passed by Congress
- 2002: Sarbanes-Oxley passed by Congress
- 2003: CA data breach law

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How Much Information Is There in the World?

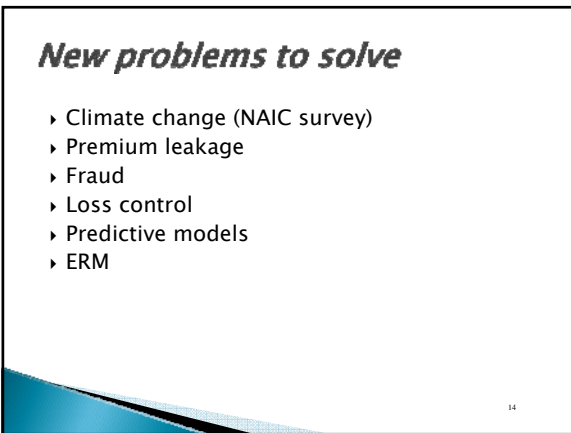
- ▶ Michael Lesk (*Network World*, October 28, 2003)-
 - including sounds and images there are thousands of petabytes of information
 - T.K. Landauer - "How much do people remember?", *Cognitive Science*, Oct/Dec 1986: the human brain holds 200 MB of information

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Data

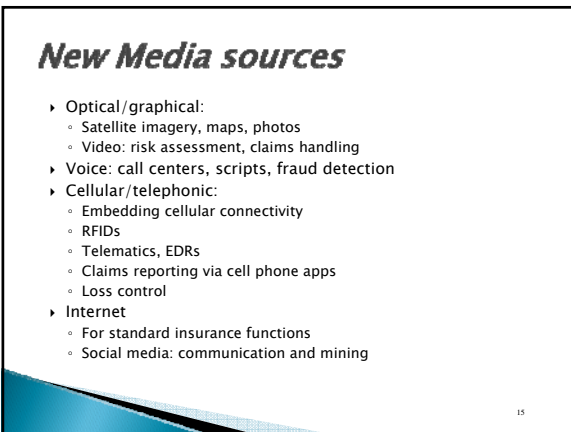
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New problems to solve

- ▶ Climate change (NAIC survey)
- ▶ Premium leakage
- ▶ Fraud
- ▶ Loss control
- ▶ Predictive models
- ▶ ERM

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New Media sources

- ▶ Optical/graphical:
 - Satellite imagery, maps, photos
 - Video: risk assessment, claims handling
- ▶ Voice: call centers, scripts, fraud detection
- ▶ Cellular/telephonic:
 - Embedding cellular connectivity
 - RFIDs
 - Telematics, EDRs
 - Claims reporting via cell phone apps
 - Loss control
- ▶ Internet
 - For standard insurance functions
 - Social media: communication and mining

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Expanded scope

- ▶ Privacy: in sync with Chief Privacy Officer
- ▶ C-level: in sync with business strategies
- ▶ Quality
 - Broader application to new uses of data,
 - More emphasis on external and an enterprise view
- ▶ Standards implementation

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New data types

- ▶ GIS
- ▶ GPS
- ▶ Traffic
- ▶ Weather
- ▶ Health/Medical
- ▶ Pharma
- ▶ Risk components

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New tools/techniques

- ▶ Metadata repositories, data dictionaries, MDM,
- ▶ ETL
- ▶ Data profiling, audits and controls
- ▶ Data and text mining
- ▶ Entity resolution
- ▶ Visualization
- ▶ Longitudinal functionality
- ▶ Encryption

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Uses

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Actuaries

- ▶ Value of Predictive modeling dependent on Quality Information responding to what is needed
 - Underwriting
 - Rating
 - Claims administration
 - Fraud detection and prevention
 - Operations
- ▶ Reserving Opinions and being held legally responsible for the data that is being used
- ▶ Ratemaking and adequate, responsive classification systems
- ▶ Current not a year old to respond to changing situations
- ▶ Catastrophe information

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Financial Officers

- ▶ Sarbanes Oxley requirements
- ▶ SEC Financial Reports
- ▶ Solvency II requirements
- ▶ Risk Based Capital Requirements

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Underwriters/Business Managers

- ▶ Increased automation
- ▶ Accurate experience modifications
- ▶ Individual insured pricing
- ▶ Current market conditions
- ▶ Proper exposure
 - Premium leakage
 - Pre-fill
- ▶ Claims management
- ▶ Loss Control
- ▶ Distribution channels/new markets

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Strategies and Plans

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What is Strategic Data Planning?

- ▶ An alignment of Business Vision, Mission, Goals and Initiatives to the underlying data and information of an organization
- ▶ Requires an Understanding of:
 - Your Direction in 18–24 months and in five years
 - Industry direction in 18–24 months and in five years
 - Opportunities for your organization
 - Target benchmarks
 - Data and Information
 - Available
 - Needed
 - Data Gaps

Data – treated like all corporate assets

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Why Strategic Data Planning?

- ▶ Facilitate alignment and traceability of significant IT investments to their respective business drivers
 - Provide a process and a set of tools to facilitate Business and IT planning and decision-making
 - Maintain a common and consistent view of data that is shared company wide
 - Aids good corporate governance and promotes data transparency
- ▶ Poorly-managed data WILL result in faulty business decisions

Data and information support corporate decision-making and provide competitive advantage

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Components of an Enterprise Data Strategy

The Rules, Tools, and Schools...

Organizational level:

- ▶ Information Governance
- ▶ Data Stewardship
- ▶ Data Architecture
- ▶ Data and Process Models
- ▶ Training and Education

Data level :

- ▶ Data Element Management
- ▶ Data Quality
- ▶ Data Standards
- ▶ Data Privacy & Security

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Key Components of Strategic Data Planning

- ▶ Strategic Data Planning is primarily a Business, not an IT function.
 - IT critical to any enterprise data strategy.
- ▶ Actuaries are uniquely positioned in an organization – data savvy as data definers and users, senior business level visibility, etc. – to be prime movers in Strategic Data Planning.

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Best Practices

- Establish a Corporate or Chief Data Steward
- Foster data and data quality standards
- Structure organization to promote good data management and data quality
- Data flows from business processes
- Manage DQ as close to the source as possible
- Establish processes to maximize data quality and utility
- Design and maintain data, systems and reporting mechanisms in a manner that promotes good data management and data quality

Strategic Data Planning & Enterprise Risk Management

- An understanding of risk exposures *across and beyond the organization*
 - Market Risk, Credit Risk, Operational Risk, as well as Insurance Risk
 - What impact does your investment portfolio have on your operations
 - What impact does fluctuating currency have?
 - What risks are your key stakeholders subject to?
- Enterprise Risk Management brings in a “new” level and source of data and information that needs to be managed

Summary

What You Should Be Doing to Be a 21st Century Data Manager

- ▶ Promote data governance within the organization
- ▶ Define and follow enterprise data strategies
- ▶ Support the interoperability of data within the organization and with trading partners
- ▶ Metadata, metadata, metadata, ...
- ▶ Know and vet third party data resources

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What You Should Be Doing to Be a 21st Century Data Manager

- ▶ Control access to your granular data resources
- ▶ Develop and implement comprehensive and flexible data quality measures
- ▶ Remember that data management applies to structured and unstructured data sets
- ▶ Require adherence to data management best practices not only at the corporate level but also at the desk top level

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Open Discussion/Questions

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