

Data Modeling Contentious Issues

Karen Lopez
InfoAdvisors, Inc.
www.infoadvisors.com

Karen López, I.S.P.

- Karen is the moderator of the Data Modelling List. She has 20+ years of data modeling experience on large, multi-project programs
- She has a B.Sc. in Computer Technology / Information Systems from Purdue University
- She is a former President of the Information Resource Management Association of Canada (IRMAC)

InfoAdvisors
© 2007 InfoAdvisors, Inc.

About this Presentation

We will be using an interactive format - you will be participating in informal polls about data modeling issues and best practices.

This is not an introductory presentation - a good knowledge of data modeling issues will be assumed.

InfoAdvisors
© 2007 InfoAdvisors, Inc.

Why Contention?

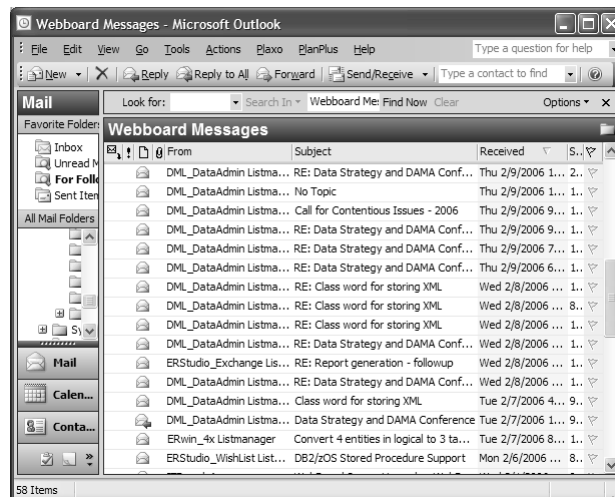
...because people are contentious!

InfoAdvisors' Discussion Groups

- E-mail, web, RSS and newsgroup based discussion group
- Data Modeling, Frameworks, Tools Groups
- Over 3000 subscribers
- Moderated
- No Charge
- www.infoadvisors.com

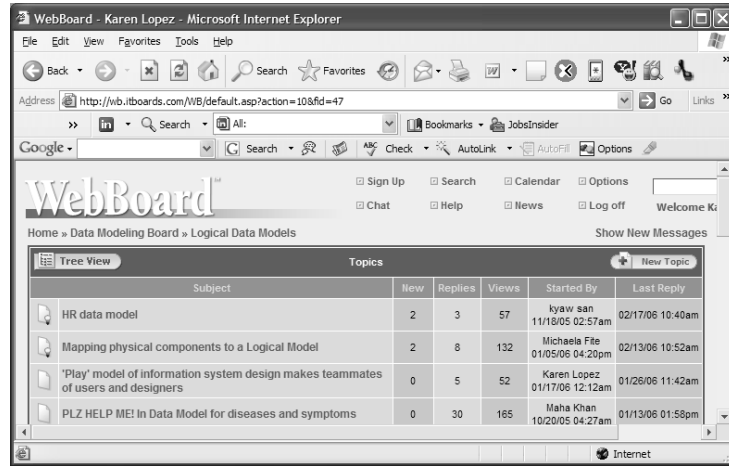
InfoAdvisors
© 2007 InfoAdvisors, Inc.

E-mail



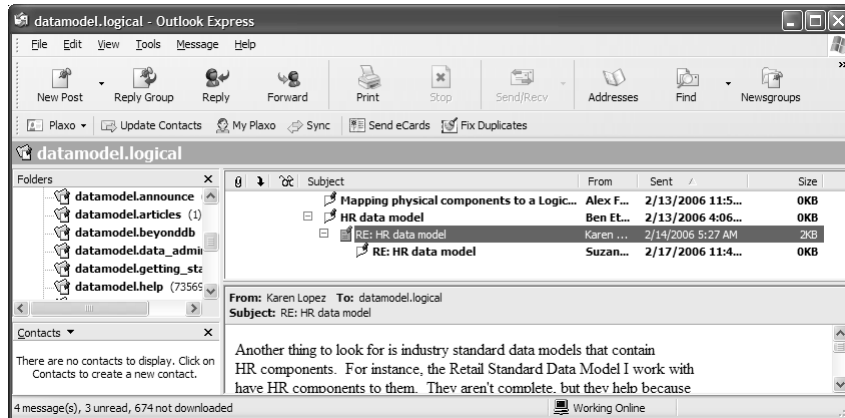
InfoAdvisors
© 2007 InfoAdvisors, Inc.

Web



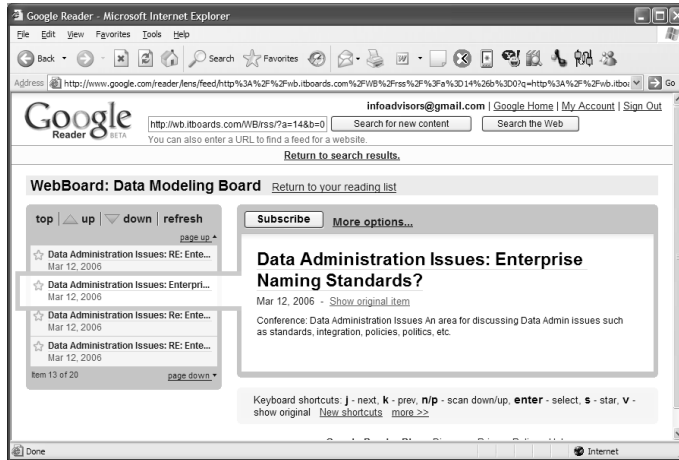
InfoAdvisors
© 2007 InfoAdvisors, Inc.

Newsgroups



InfoAdvisors
© 2007 InfoAdvisors, Inc.

RSS Feeds



InfoAdvisors
© 2007 InfoAdvisors, Inc.

Agenda

- Contentious Issues
 - Background
 - Discussion Quotes
 - Poll
 - Results & Analysis
- Resources

InfoAdvisors
© 2007 InfoAdvisors, Inc.

Contentious Issues

Near-religious discussions and debates

- People rarely change their minds based on this discussion
- The most successful discussions are ones where both sides learn something new about the other viewpoint.

InfoAdvisors
© 2007 InfoAdvisors, Inc.

Do we need Classwords?

- A traditional naming convention
- Usually means there's a standard classword list
- Some tools can check for standards compliance
- Examples: Date, Amount, Count, Quantity

InfoAdvisors
© 2007 InfoAdvisors, Inc.

Attribute Names

- Customer First Name
- Customer

- Backordered Specialty Order Item ID
- Item ID
- Item

InfoAdvisors
© 2007 InfoAdvisors, Inc.

...not the same as

- Domains
- Data Types
- UDTs

InfoAdvisors
© 2007 InfoAdvisors, Inc.

Class words

Most DA's have very strong opinions on class words. Usually, the DA with the strongest opinion wins this debate. Every company where I've worked has a different set of class words based on their business needs.

The only point I ever bring up in addressing class words is not to have too many of them. The more you have, the more difficult the class words are to manage.

- Walter

InfoAdvisors
© 2007 InfoAdvisors, Inc.

Class words

In my opinion it all boils down to 3 basic things:

Exception, common sense and compromise. You can employ all three and still have a very strong set of standards. Standards must be workable to be affective. That means they must have some flexibility or you will never get buy in from those you want to use them.

- Garry

InfoAdvisors
© 2007 InfoAdvisors, Inc.

Class words

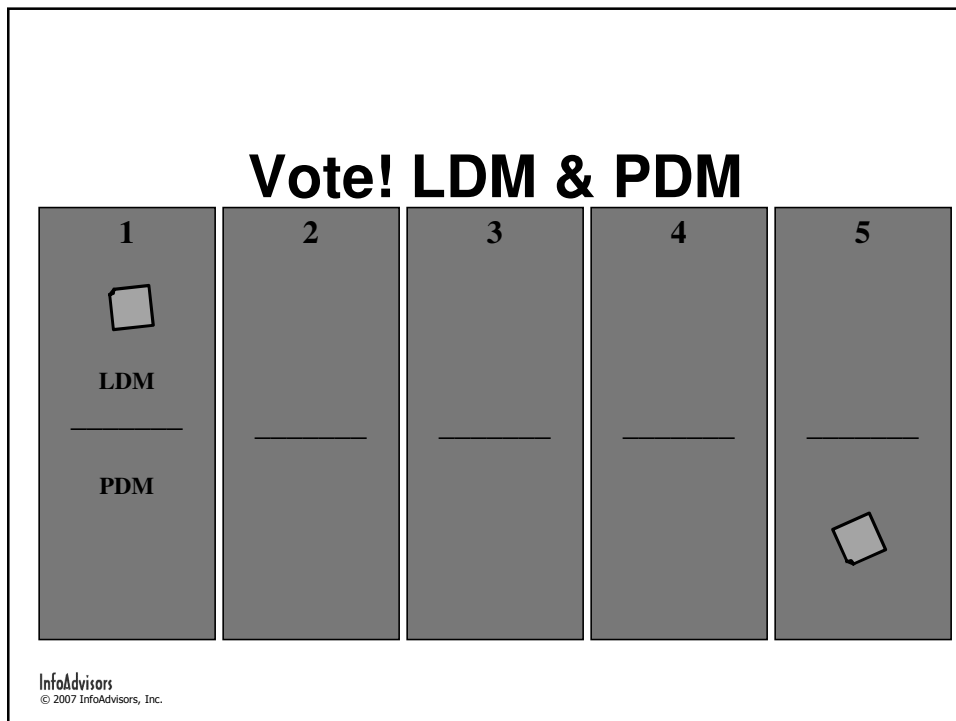
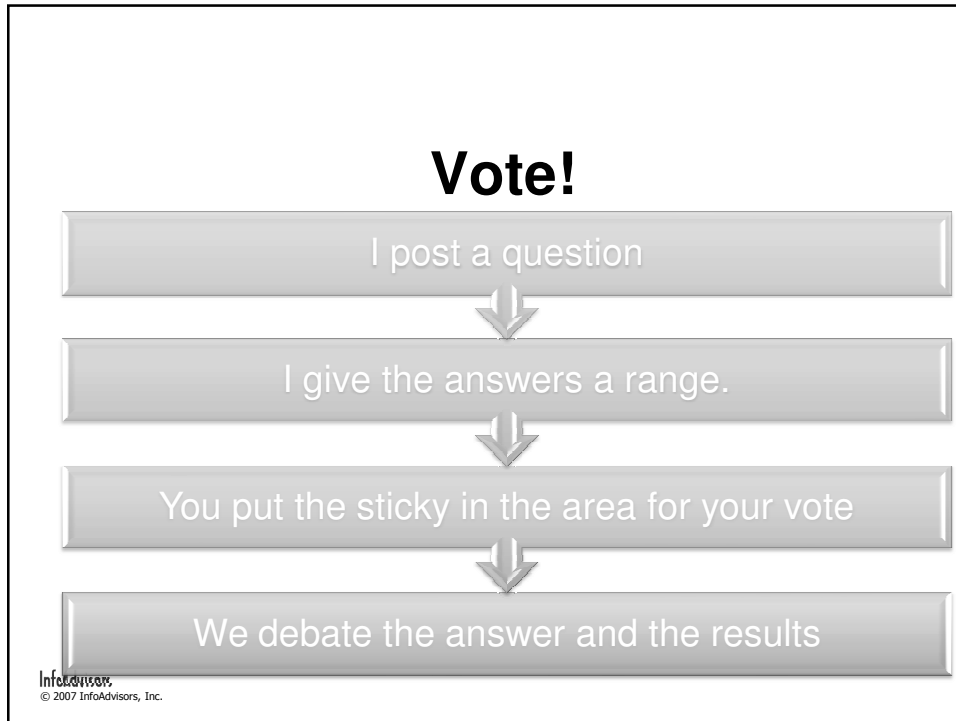
I have come to see that class words are metadata, and that what they represent, along with other meta-attributes of data, should be kept in some sort of metadata repository. Trying to add metadata as part of a field's name seems to me (1) to waste about 3 or 4 bytes that could profitably be used otherwise, (2) be a constant source of contention between folks, and (3) in the end add very little to what one already knows from data type definitions.

- Joseph

InfoAdvisors
© 2007 InfoAdvisors, Inc.

Our Process...

...vote early and vote often!



Vote! General

1	2	3	4	5
LDM ----- PDM	----- <input type="checkbox"/>	-----	-----	-----

InfoAdvisors
© 2007 InfoAdvisors, Inc.

Ready?

Vote: Class words

Does a good LDM / PDM data model use classwords?

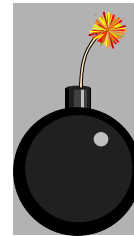
1. Always
- 2.
- 3.
- 4.
5. Classwords are so obsolete....

InfoAdvisors
© 2007 InfoAdvisors, Inc.

Class words

TRAP!

You may find yourself debating a topic because there is no common definition of a model or object, not because there is a real disagreement.



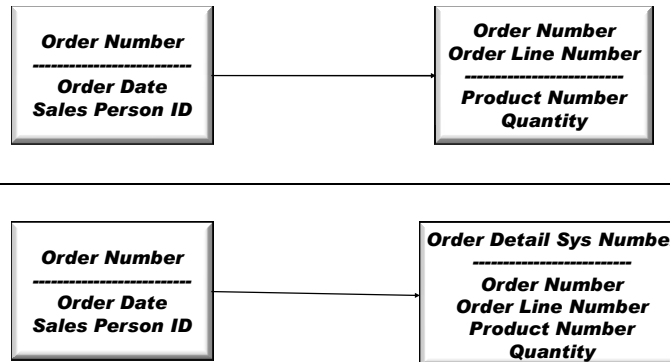
InfoAdvisors
© 2007 InfoAdvisors, Inc.

Keys - Natural or Surrogate

- Just what you call them may show your true colors....
 - Surrogate, Non-intelligent, Unnatural, Dataless or Meaningless
 - Natural, Intelligent, Normal, Cluttered

InfoAdvisors
© 2007 InfoAdvisors, Inc.

Keys – Natural or Surrogate



InfoAdvisors
© 2007 InfoAdvisors, Inc.

Keys - Natural or Surrogate - Vote

What best describes your approach in an LDM / PDM?

1. **Surrogate Keys? We don't need surrogate keys - we have natural identifiers.**
- 2.
- 3.
- 4.
5. **Every entity deserves its own surrogate key.**

InfoAdvisors
© 2007 InfoAdvisors, Inc.

Surrogate Keys

TIP!

Every decision is ultimately made based on cost, benefit, and risk. Be prepared to analyze all three.



InfoAdvisors
© 2007 InfoAdvisors, Inc.

Process Models

- Workflows, DFDs, Use Cases, etc.
- Sometimes address data issues
- Off again, on again
- May be collaborative, may not

InfoAdvisors
© 2007 InfoAdvisors, Inc.

Process Models

- Business Analysts
- Developers
- UMLers
- Enterprise Architects
- Process Analyst/Modeler

InfoAdvisors
© 2007 InfoAdvisors, Inc.

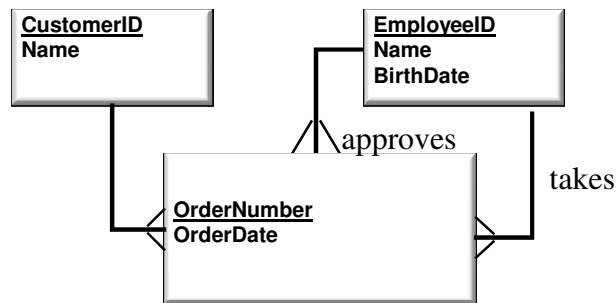
Vote: Process Models

Which should drive efforts?

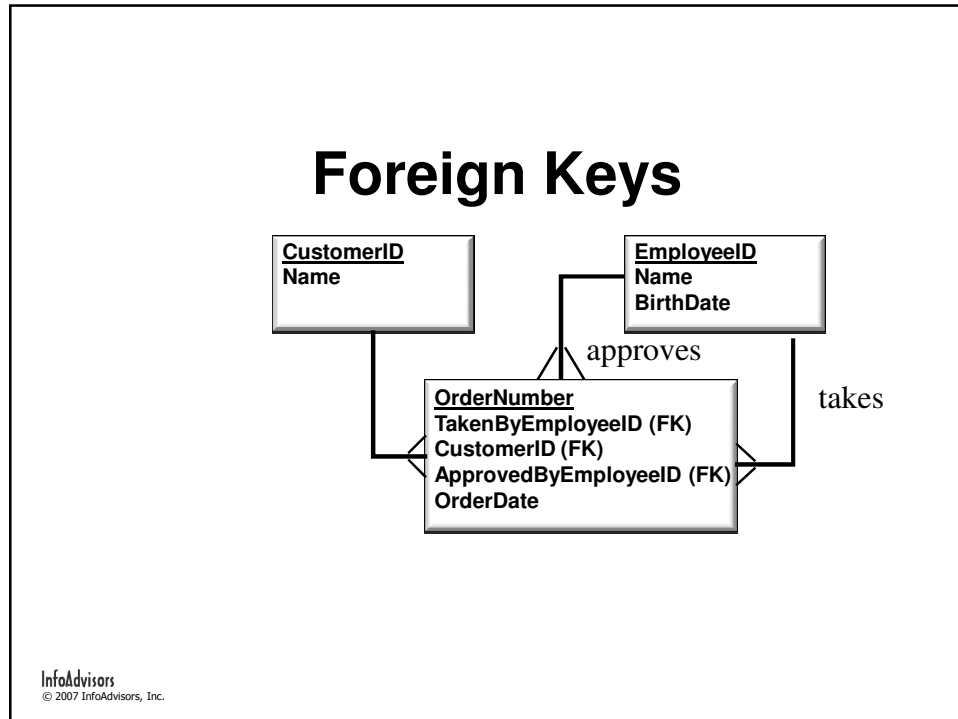
1. Data Models
- 2.
- 3.
- 4.
5. Process Models

InfoAdvisors
© 2007 InfoAdvisors, Inc.

Relationships



InfoAdvisors
© 2007 InfoAdvisors, Inc.



Relationships & Foreign Keys

- FKs: results of Relationships
- Migrated attribute may be role named
- Relationships may be named...or not.

Vote: Relationships & FKs

Do you display FKs in your LDM / PDM model?

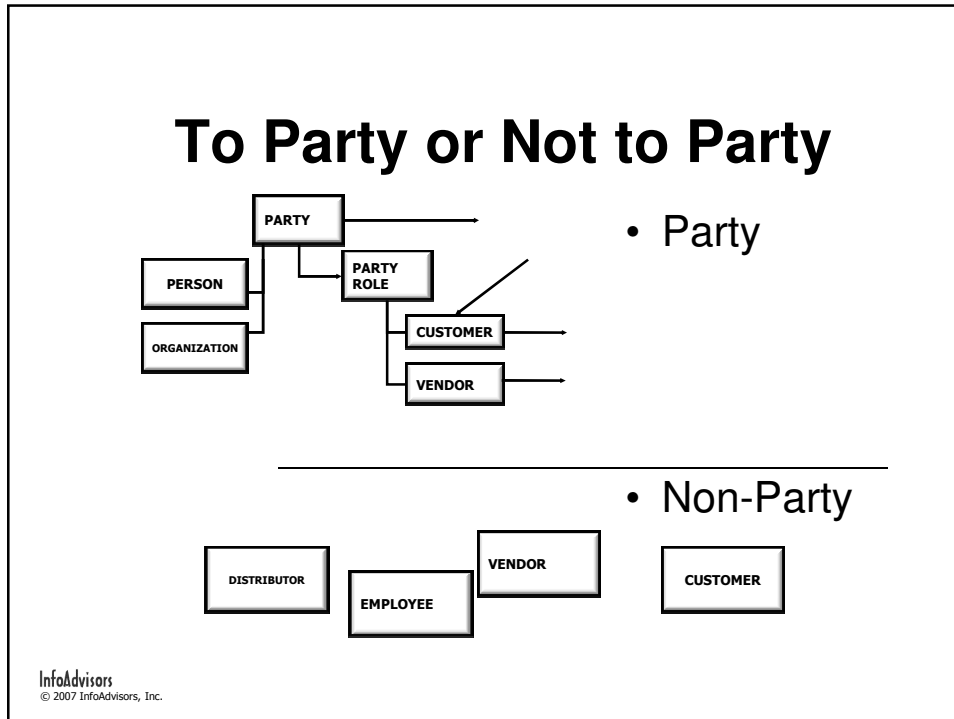
1. Never – They clutter
- 2.
- 3.
- 4.
5. Always – They show meta data

InfoAdvisors
© 2007 InfoAdvisors, Inc.

To Party or Not to Party

- Party, Party Role, Party Type, Party Category
- Migration of Party ID
- Use of Subtype “Owned Keys”
- Universality of Party

InfoAdvisors
© 2007 InfoAdvisors, Inc.



Vote: To Party or Not to Party

Which is the best approach to PARTY in an LDM / PDM?

1. I always use this structure, where applicable.
- 2.
- 3.
- 4.
5. It's too academic, too theoretical and it just won't work

InfoAdvisors
© 2007 InfoAdvisors, Inc.

Universal Data Models

- Some Data Models are models or subsets of models that an organization can purchase.
- They are sometimes prepared for a specific industry
- May be very generic, may be both.
- May be proprietary or open source

InfoAdvisors
© 2007 InfoAdvisors, Inc.

Universal Models

- Silverston UDMs
- ISDMs
- Patterns
- Proprietary Models
- Wiki Models

InfoAdvisors
© 2007 InfoAdvisors, Inc.

Vote: Universal Data Models

What do you think about Generic Data Models or Patterns?

1. I love them and won't ever start a project from a blank page again.
- 2.
- 3.
- 4.
5. They are so high level/cost so much/take too long to understand that I don't see the value in purchasing them.

InfoAdvisors
© 2007 InfoAdvisors, Inc.

SOAs, Ontologies, ESBs, New TLAs and Shoe Strings

- New approaches, methods, techniques
- Often large investments
- Often large returns
- Often large risks
- May be planned with or without data architectures... and architects

InfoAdvisors
© 2007 InfoAdvisors, Inc.

SOAs, Ontologies, ESBs, New TLAs and Shoe Strings

- Organizational Maturity
- Methodological Maturity
- Process Maturity
- Professional Maturity
- Managerial Maturity

InfoAdvisors
© 2007 InfoAdvisors, Inc.

Vote: New Approaches

How will these new approaches affect your DM goals?

1. More Work / Budget / Focus
- 2.
- 3.
- 4.
5. Less Work / Budget / Focus

InfoAdvisors
© 2007 InfoAdvisors, Inc.

Who Gets to Update the Model?

- Many marketing pitches portray a team of developers, modelers, DBAs, etc., happily working on the model
- Is it “More hands make for less work” or “Too many cooks spoil the soup”?

InfoAdvisors
© 2007 InfoAdvisors, Inc.

Who Gets to Update the Model

1. Only seasoned Data Modeling Professionals
- 2.
- 3.
- 4.
5. Everybody – we’re all professionals here

InfoAdvisors
© 2007 InfoAdvisors, Inc.

Who calls the shots in a Logical Data Model?

- Many stakeholders in a LDM
- Not everyone shares the same understanding about the purpose of the LDM
- DM tools can greatly influence the decision
- DA's can report through a variety of departments

InfoAdvisors
© 2007 InfoAdvisors, Inc.

Who calls the shots in a Logical Data Model?

The FINAL say on LDM / PDM decisions belongs to:

1. The Data Architect/Modeler
2. The Project Manager
3. The User...Customer
4. The DBA
5. The CIO/CEO

InfoAdvisors
© 2007 InfoAdvisors, Inc.

Responsibility

- Current Project
- Current Boss
- Enterprise
- Shareholders
- Family
- ???

InfoAdvisors
© 2007 InfoAdvisors, Inc.

Responsibility

- If Cost, Benefit, and Risk is our mantra...
-whose Costs, Benefits, and Risks do we use?

InfoAdvisors
© 2007 InfoAdvisors, Inc.

Vote: To Whom Do We Answer?

1. My Current Boss, on my Current Project, on this day...
- 2.
- 3.
- 4.
5. Everybody (The Public Good)

InfoAdvisors
© 2007 InfoAdvisors, Inc.

DA – Lawyer or Architect?

- Several new legislative actions focus on data quality, integrity, reliability, availability...
- Sounds like good DA work, right?

InfoAdvisors
© 2007 InfoAdvisors, Inc.

Examples

- Sarbanes-Oxley (SOX): Financial Accountability & Reliability
- Anti-Spam Legislation: Data integrity, Reliability
- Privacy: Quality, Reliability, Accountability...

InfoAdvisors
© 2007 InfoAdvisors, Inc.

Vote: DA Role in Compliance

1. Finally, a reason for the Execs to support us...
- 2.
- 3.
- 4.
5. Hey! I don't even have time write good definitions...

InfoAdvisors
© 2007 InfoAdvisors, Inc.

What Are Your Issues?

Is that with one “L” or Two?

How is it spelled?

1. Modeling/Modeler
2. Modelling/Modeller
3. It depends on my mood...

What did we learn?

Contentious Issues

Near-religious discussions and debates

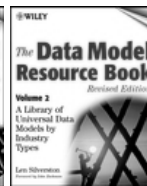
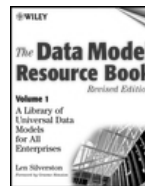
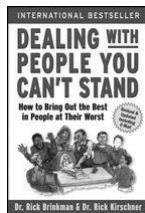
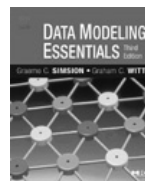
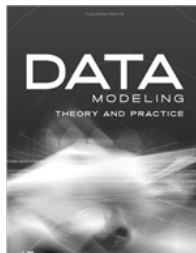
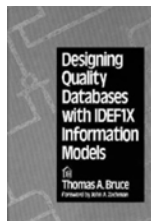
- People rarely change their minds based on this discussion
- The most successful discussions are ones where both sides learn something new about the other viewpoint.

Contentious Issues

...and that we have a long way to go....

InfoAdvisors
© 2007 InfoAdvisors, Inc.

Recommended Books



InfoAdvisors
© 2007 InfoAdvisors, Inc.

Thank you!

I'd appreciate feedback of any type about
this presentation.

karenlopez@infoadvisors.com

InfoAdvisors
© 2007 InfoAdvisors, Inc.

InfoAdvisors

11066 Sheppard Ave East
Toronto, ON CANADA

karenlopez@infoadvisors.com
<http://www.infoadvisors.com>

3000+ IRM participants
subscribed to several discussion
groups

InfoAdvisors
© 2007 InfoAdvisors, Inc.