



# Your data model is terrible! Let me show you why.

Presented by: Kris Vanderwater, Sr. Software Engineer  
& ContentHub Tech Lead, Acquia



## Kris “EclipseGc” Vanderwater

- CTools Co-Maintainer
- Drupal 8 Contributor
- Sr. Software Engineer @ Acquia
- Tech Lead for Acquia ContentHub
- Multi-year focus on Page Layout
- Multi-year focus on Data model replication strategies

# Data Modeling

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- What is it?

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  - Subset of Information Architecture

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  - How you store data
  - Where fields reside
  - How data is inter-related



# Entity References

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  - Cardinality

# Entity References

- Change Reference per Revision



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- Reference Revisions

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  - Entity Reference Revisions (Module)

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  - Entity Reference Revisions (Module)
  - Paragraphs (Module)

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- Foundation of most Data Problems

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  - Example in Drupal 7

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    - Took 30+ minutes to load 1 page
    - No ajax loading of variants (timeout)



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  - Moved fields that didn't affect price OFF of variants and ONTO line items

# D8 Entity Reference Horror Story

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- Paragraphs & ERR

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  - Using intermediate Paragraph Types for Layout

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  - Customer alleged 50GB err tables



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- Could be worse. At least we have entity reference autoloading.

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# D8 Entity Reference Example

- Simple Article
  - Author
  - Bundle
  - Tag (Taxonomy term)
  - Image
  - Alias
  - Form Display
  - View Display(s)
    - Field Configs
      - Field Storage
  - All of this again for user, image and tags
- Updated Total of Entities: 40 (or whatever it is)

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    - Department Select List

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  - Nested to make complex layouts

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  - Data model cruft & complexity

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    - No new entity, just write a plugin
    - Superior Data Model 99%
    - Easier said than done :-)
    - Just data, not layout

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- Uses Layout & Block plugins
- Can use “Content Blocks”
  - Similar to Paragraphs
  - Less data cruft
  - More visual

# Drupal Data Modeling Best Practices

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- Don't use data modeling tools for page layout

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- Custom field types > paragraphs

# Where to Create Entity References?



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  - Paragraphs kind of does both

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- Many to 1 need consideration
  - How long will references exist?
  - How many references?
  - UX for editing?
- Most obvious and dependency encumbered approach

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- Simple UX
- Simple Dependencies
- Usage over time can be accounted for by queries.



# Paragraphs

- Does parent->child

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- Has fields for parent type & id

# Paragraphs

- Does parent->child
- Has fields for parent type & id
- Not real entity references (for better or worse)

# When to Create a New Entity Type?

# Criteria

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# Criteria

- An existing entity type doesn't suffice
- Is it a stand-alone page? Node
- Does it display many items? Term?
- Is it used on many pages? Block
- Must have special criteria

# A Warning

- Fieldable entity types are always susceptible to every other problem we've discussed

# Why Do I Know This?

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- Identification of ALL entity dependencies

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- Tech Lead for Acquia ContentHub
- Data Replication/Syndication
- Identification of ALL entity dependencies
- Deal with data models all the time

THANK YOU,  
QUESTIONS?



# PLEASE PROVIDE YOUR FEEDBACK!

<https://www.midcamp.org/2020/topic-proposal/your-data-model-terrible-let-me-show-you-why>

The top rated sessions will be captioned, courtesy of Clarity  
Partners



# CONTRIBUTION DAY

## Saturday 10am to 4pm

You don't have to know code to give back!

New Contributor training 10am to Noon  
with AmyJune Hine of Kanopi Studios