attaining a model of health - customer success

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abstract

CA Gen models, on occasion, may contain corrupt objects or associations, sometimes referred to as “model corruptions”. It’s always been easy to find these using Encyclopedia Validate but it's been difficult to do much about them. Therefore, most organizations ignore them until they start to cause problems. This session will provide insight into how Jumar Solutions’ automation techniques help CA Gen users identify, review and resolve these errors before they can impact your critical applications and development projects.

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Jumar Solutions overview

The leading global resource, services and solutions partner to the CA Gen community and CA Technologies

jumar

insightful people intelligent solutions

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Hapag-Lloyd overview

- One of the leading global container shipping companies
- Extensive service network with 76 services around the globe
- 137 modern container vessels with a capacity of about ~617,000 TEU and more than 1.0 million container (TEU) of various types
- Global presence with about 300 sales offices in 114 countries
- Employees: ~6,900

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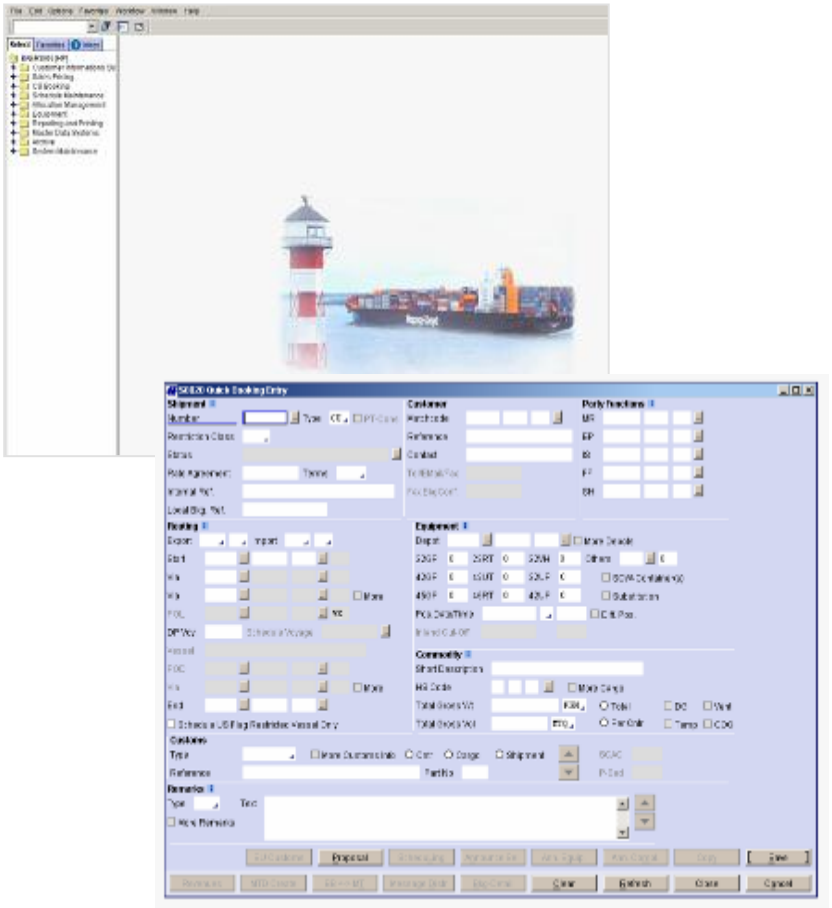
Hapag-Lloyd Freight Information System (FIS)

One Global Operational IT System

- Integrated ocean carrier transport and logistics system
- Covering the entire transport chain and interfaces with all other IT systems
- Using one transport file worldwide for each transport in a central database
- Real-time access to all data for every order, irrespective of the location
- Highest reliability and availability



The Key to the Organisation's Success

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CA Gen @ HL in figures

- 1 all-embracing Enterprise Data Model
- > 1000 CA Gen based Entities
- > 90.000.000 Objects within mainframe CE
- > 70 Models in use
- > **14,000,000** Objects within our largest live model
- > 25.000 CA Gen generated modules
- > 18 Years of production of CA Gen based application

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WHAT are we doing with CA Gen – and HOW ?

- Initial target: one all-embracing enterprise data model
  - + Excellent data consistency and analytic capability
  - – High complexity and problematic maintenance of a monolithic application like FIS
- Introduction of “Component Based Development”
  - + Separation of specification and implementation, encapsulation of logic
  - – Grown overhead due to separation of components and more complex model structure
- Modernization of the User Interfaces
  - + Model of business logic still remains in CA Gen
  - – Client and Middle Tier not completely within CA Gen model (but still model based with own model)

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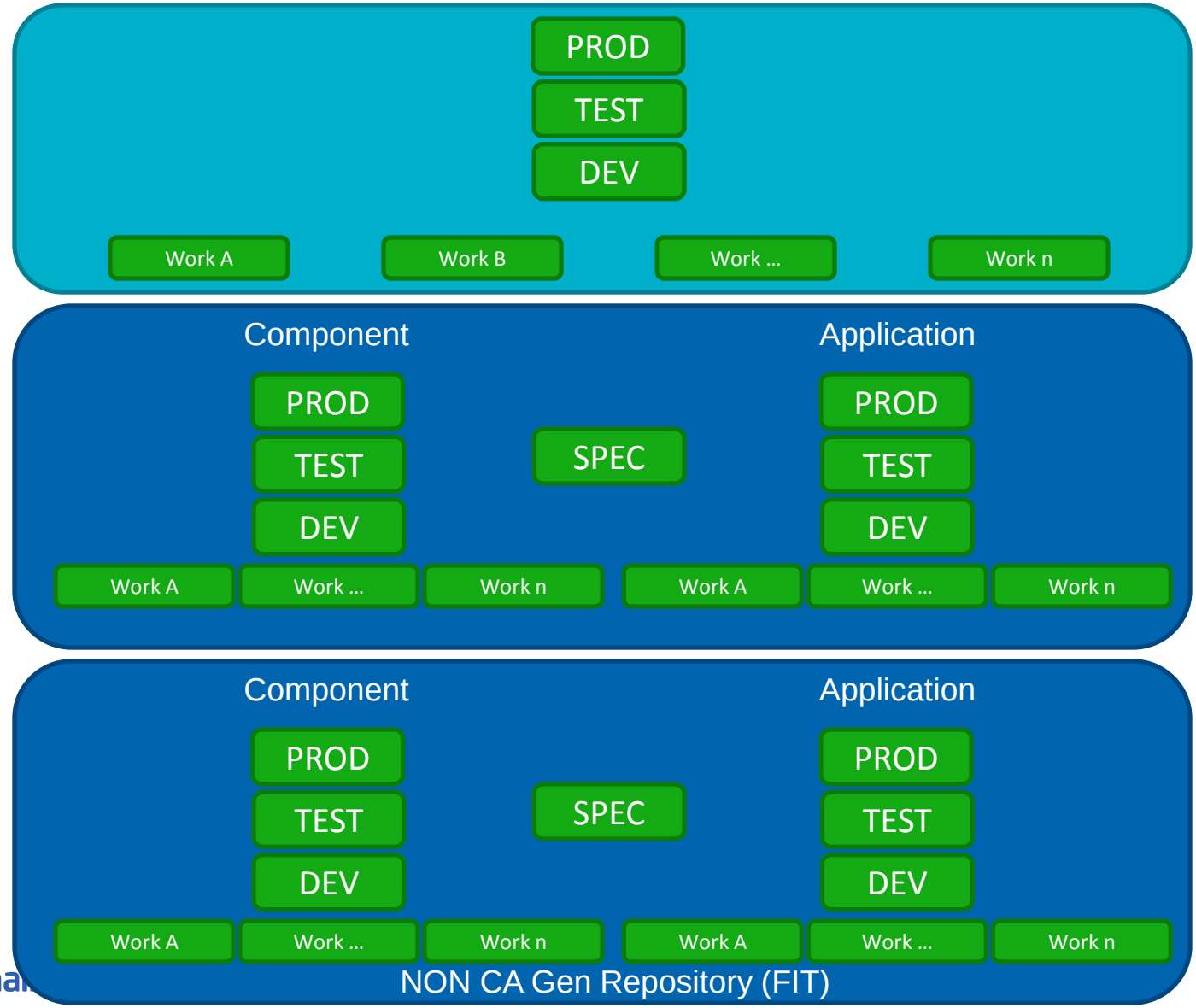
WHAT are we doing with CA Gen – and HOW ?



migration to CA Gen r8 history and beta

- Complete move to DLL technique on z/OS was already done with migration 6.5 to 7.5
- CA Gen 7.5 went out of official CA support end 2008
- CA Gen 7.6 did not bring any interesting features for us
- Release changes tend to be very complicated
- Beta participation to become aware of problems as early as possible (bad experience from 7.5 migration)
- Beta to test new (or for us new) functionality
- **Beta highlighted inconsistencies within our models (e.g. ancient object types deprecated in IEF 3.x)**
- **Urgent problems due to unavailable Subset ID‘s**
- **Increasing inability to delete “Unused” Action Blocks from models**

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migration to CA Gen r8
planning & migration

- Up to now we always did the migration by “Upgrade in Place”
- Driven by the subset id problem and the ancient object types encountered we decided to go a different way this time
  - Setup of a new CE (new binaries & new tables)
  - Download of models in Upload Format out of the existing CE
  - Upload into the new CE
  - Convert to new schema level
  - Adopt into SPEC catalog to create new model family

This approach failed !

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migration to CA Gen r8
what was the problem – and how to proceed?

- Many model corruptions
  - Partly already the download failed
    - In this case the simple solution was to first copy the model within CE
  - Partly we had problems during adopt
    - This was extremely disturbing as it took quite a long calculation time before the error occurred -> CA Support
- “Upgrade in Place” as emergency solution
  - 1:1 copy of ‘old’ CE
  - Upgrade in Place
  - Conversion of models
  - Create new models from subset of the already done work
    - Adopt & Migrate these small models

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migration to CA Gen r8
post migration

- Uncertainty of the scale of the health problem and any future impacts
- Focused investigations to the failure of HE migration
- Initial fixes provided by CA Support to remove **IEF 3.x object** types
- CA Support escalated to Jumar Solutions

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a statement before we move on!

Model corruptions do not necessarily mean that there will be associated problems with the CA Gen Model. In fact, it is not uncommon for these corruptions to exist without them affecting day to day activities. But, depending on the activities being executed (e.g. model management, upgrade, normal model updates on specific objects) the corruptions can cause failures. There are also types of model corruption that do need to be managed and the impact of them understood.

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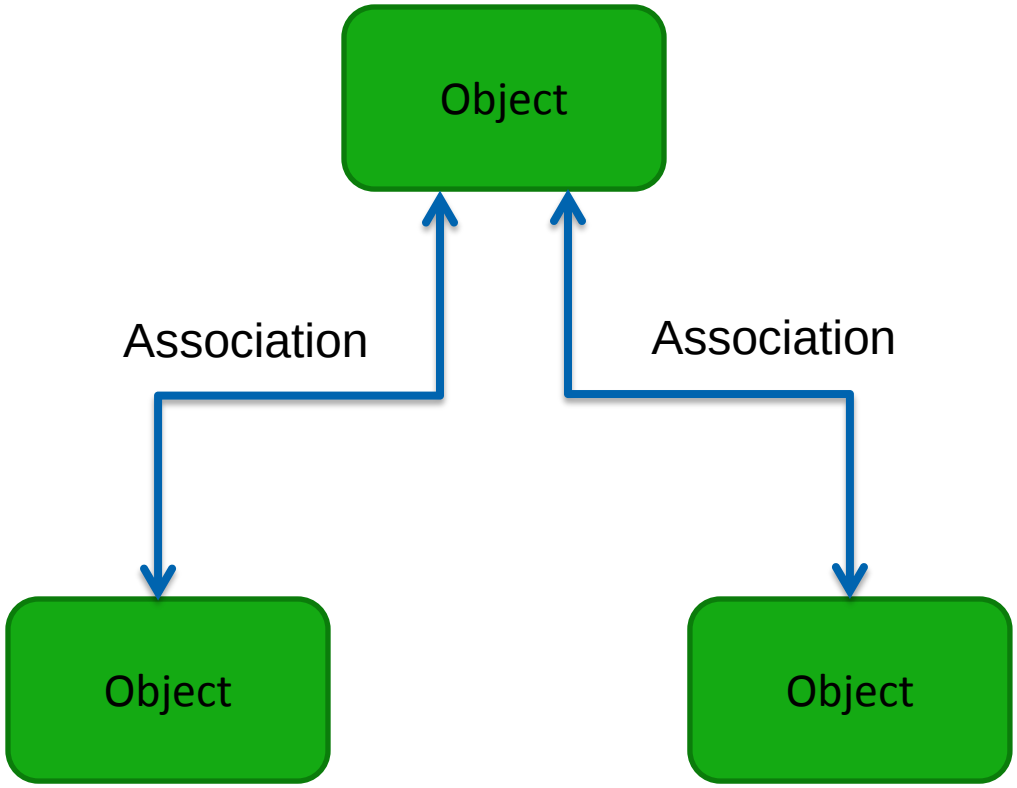
the CA Gen encyclopaedia
the basics



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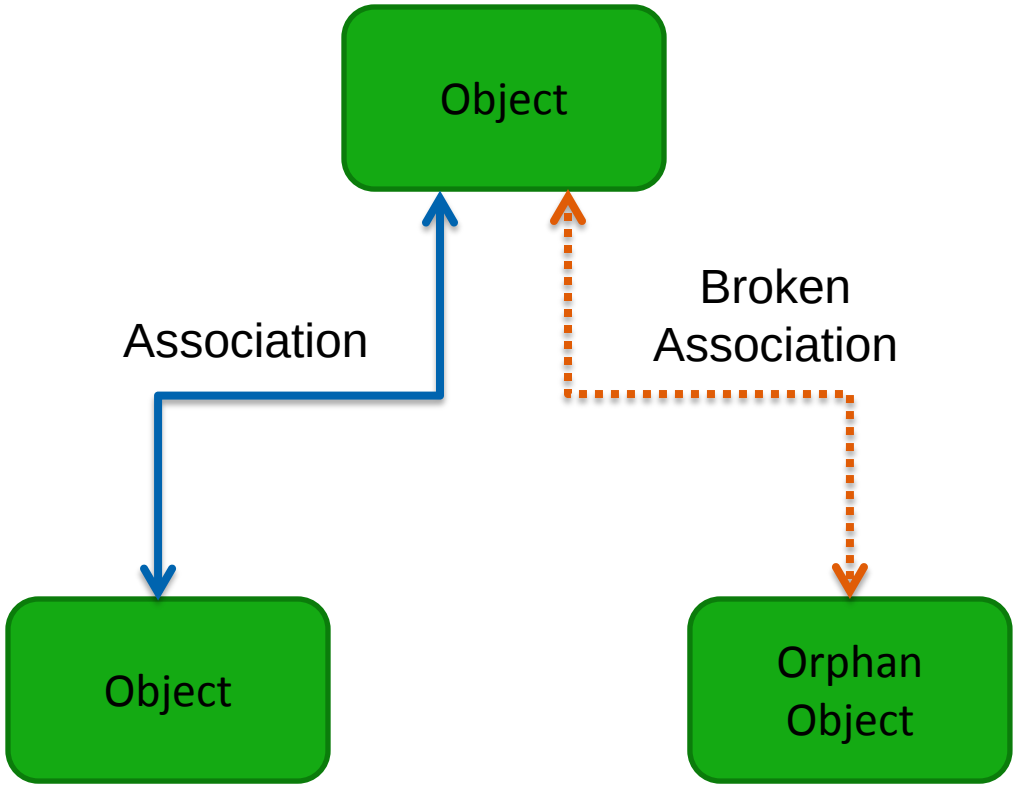

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CA Gen model corruptions

- What is a model corruption?
- An Encyclopaedia Validation Error?
- Not always

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CA Gen model corruptions: examples

- Objects without all mandatory associations (“orphaned objects”)
  - This is the most common we find and not picked up by validation report
- Duplicate single cardinality associations
- Values in properties that are not permitted
- Objects which are no longer valid (removed from schema)
- Objects with Associations to other objects which are not permitted

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a real example: the problem

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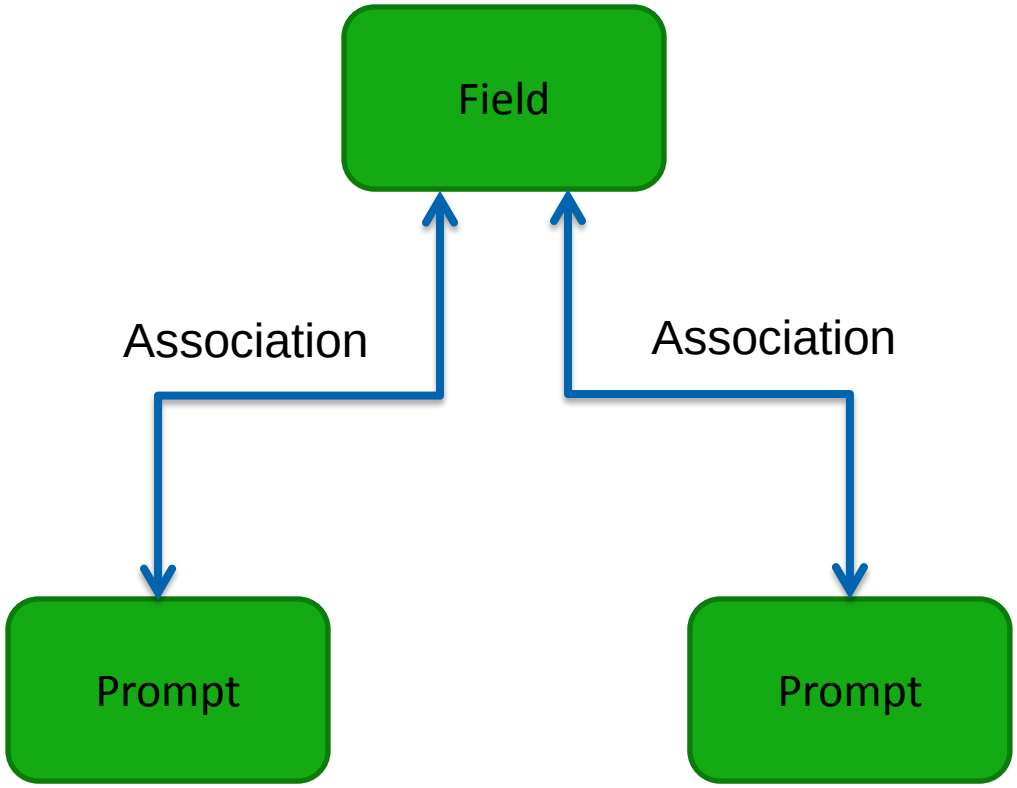
a real example: the problem
multiple prompts



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how did Jumar get involved?

- We know the schema well enough to diagnose a problem
- We are the world leaders in using the API
- We are automation experts who can help with the solution

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how does Jumar deal with CA Gen corruptions?

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our approach

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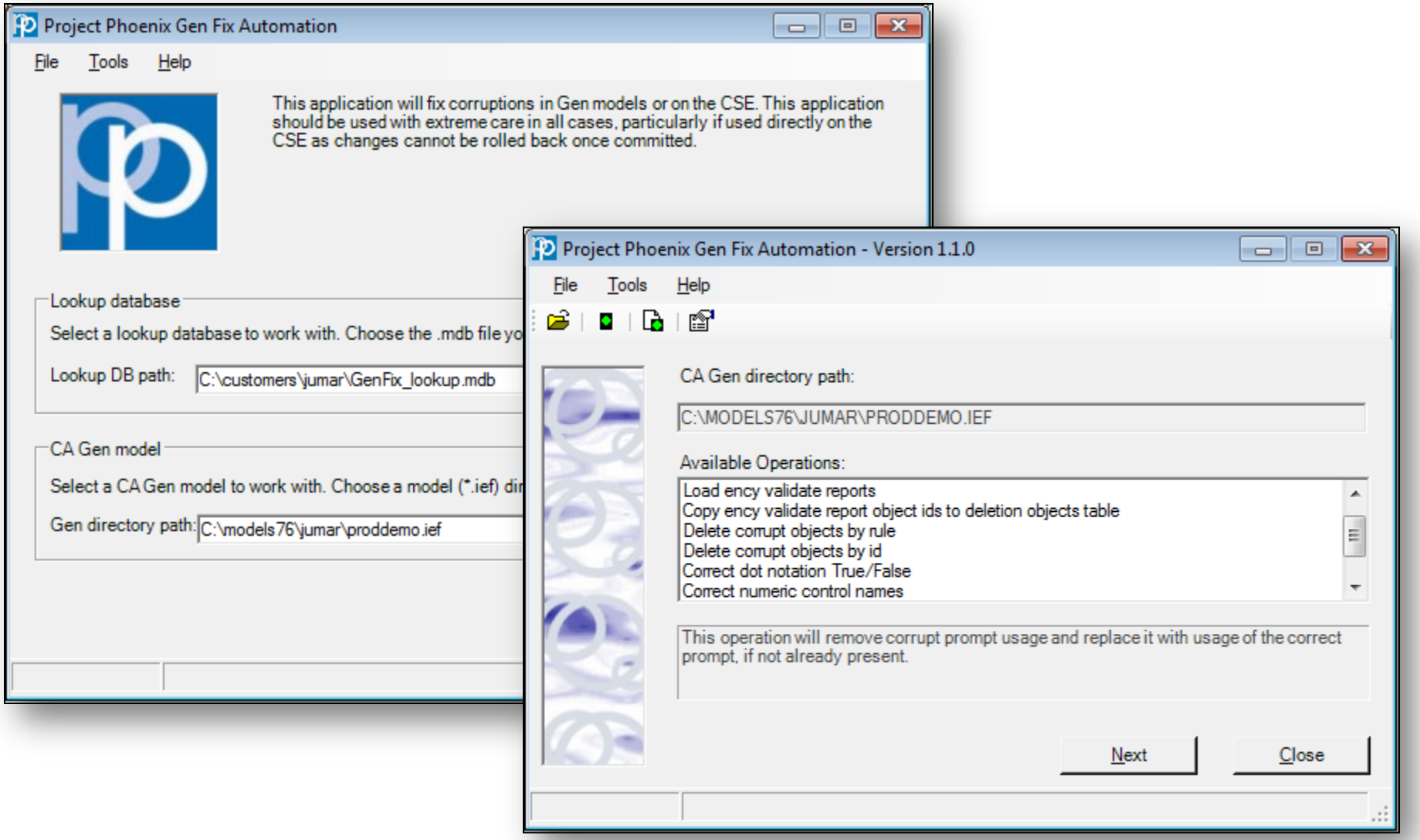
investigate



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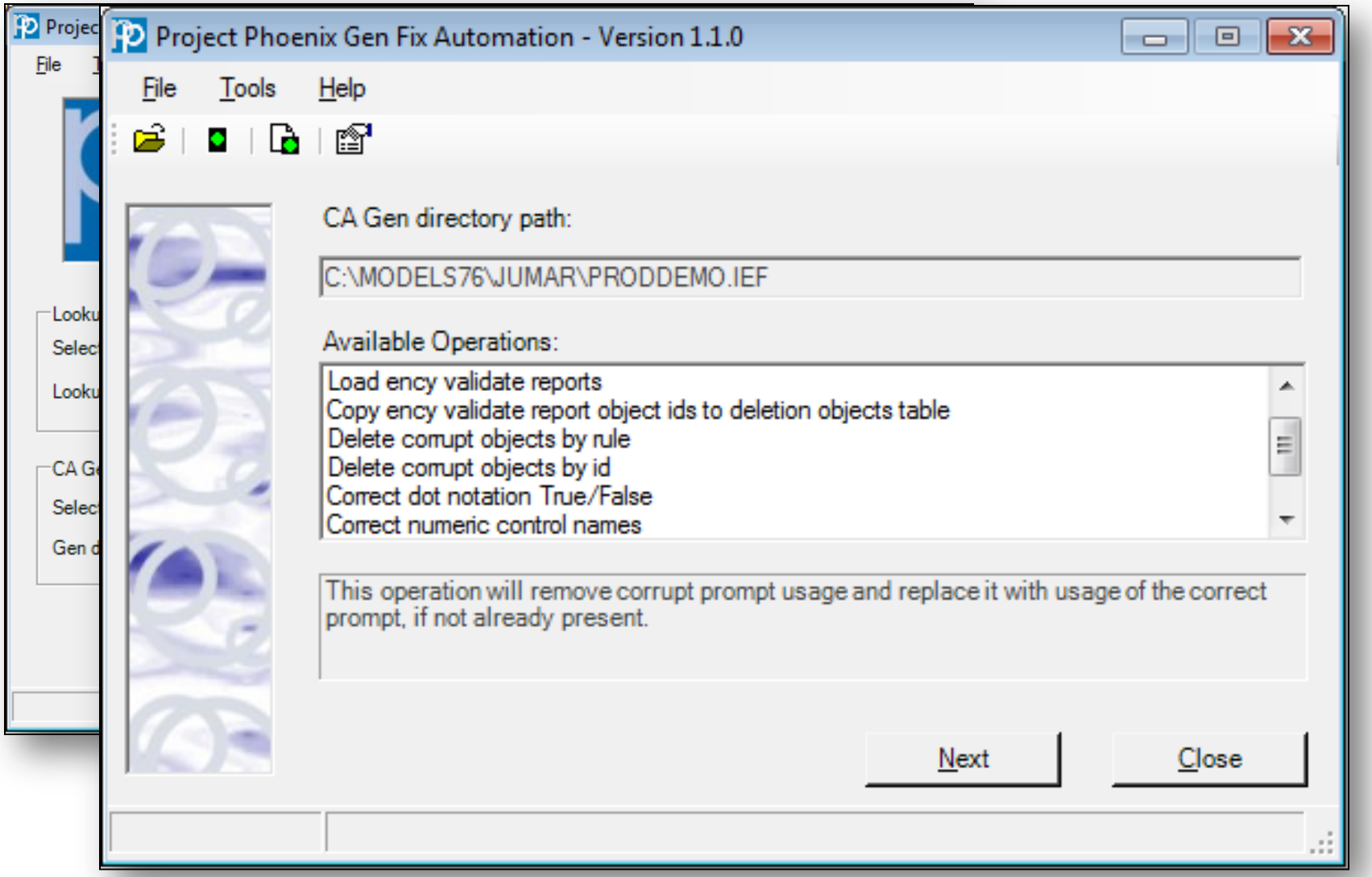
investigate



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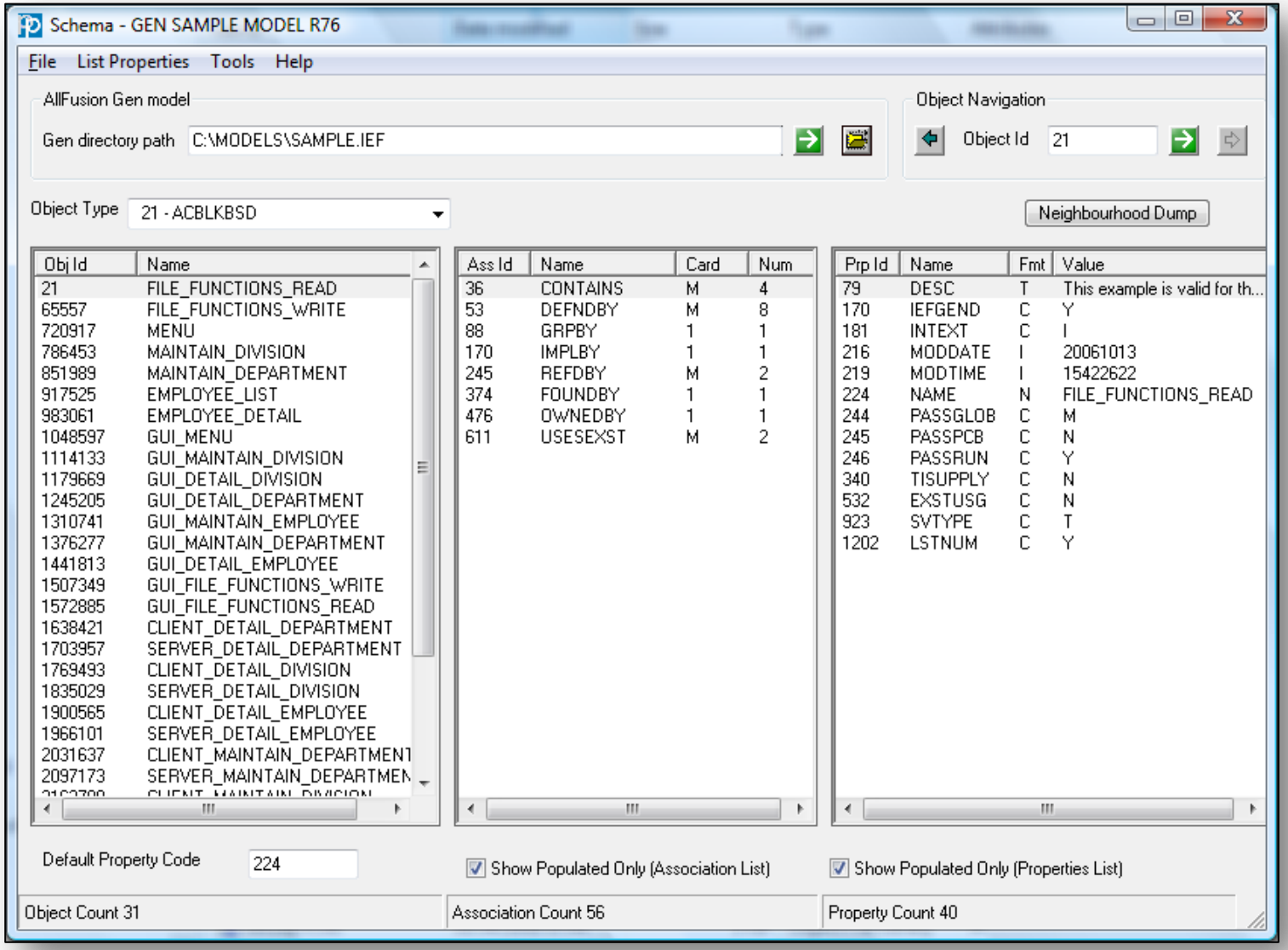
investigation: the schema tool



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our approach

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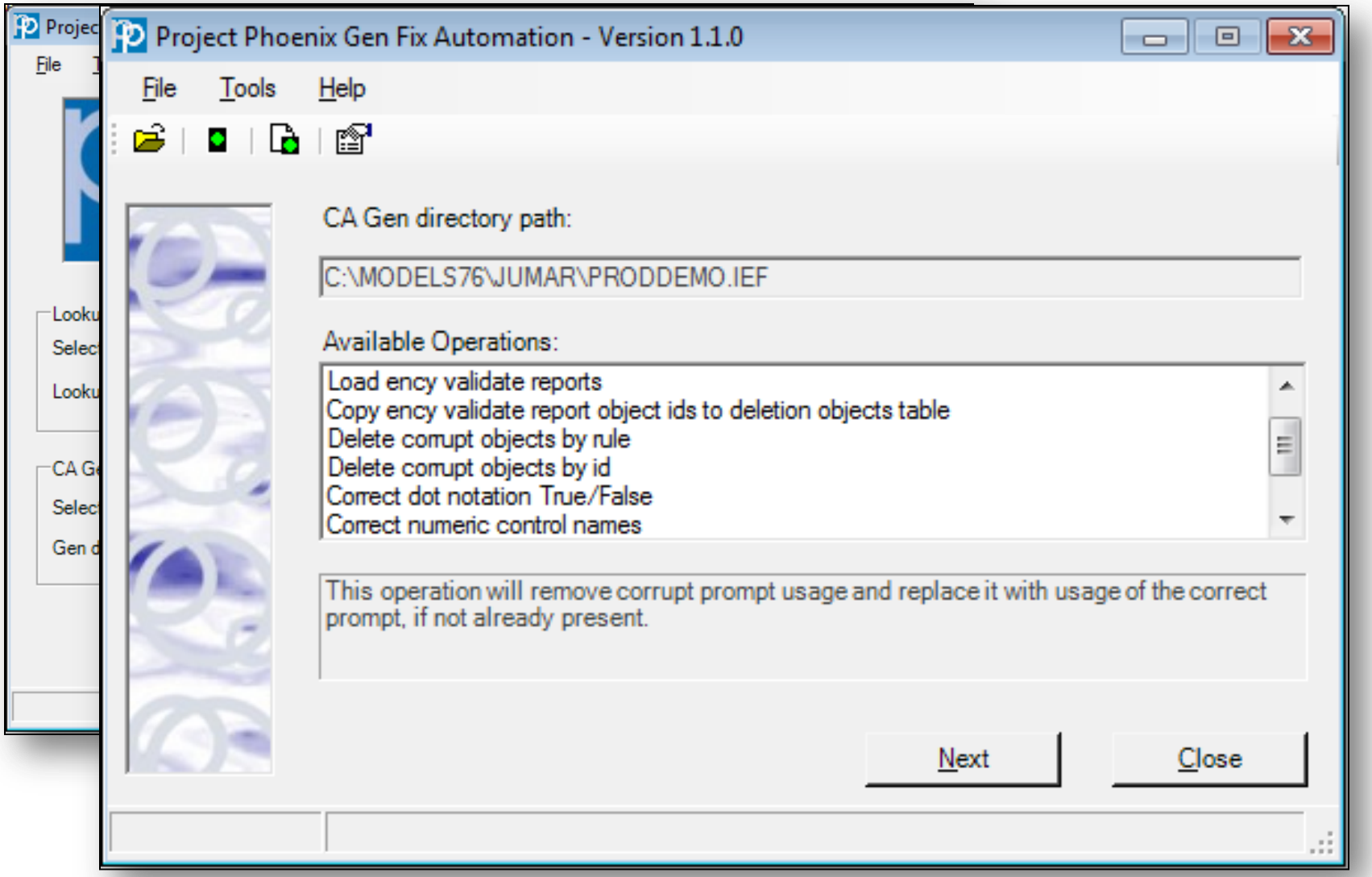

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investigate / report
encyclopedia validate reports

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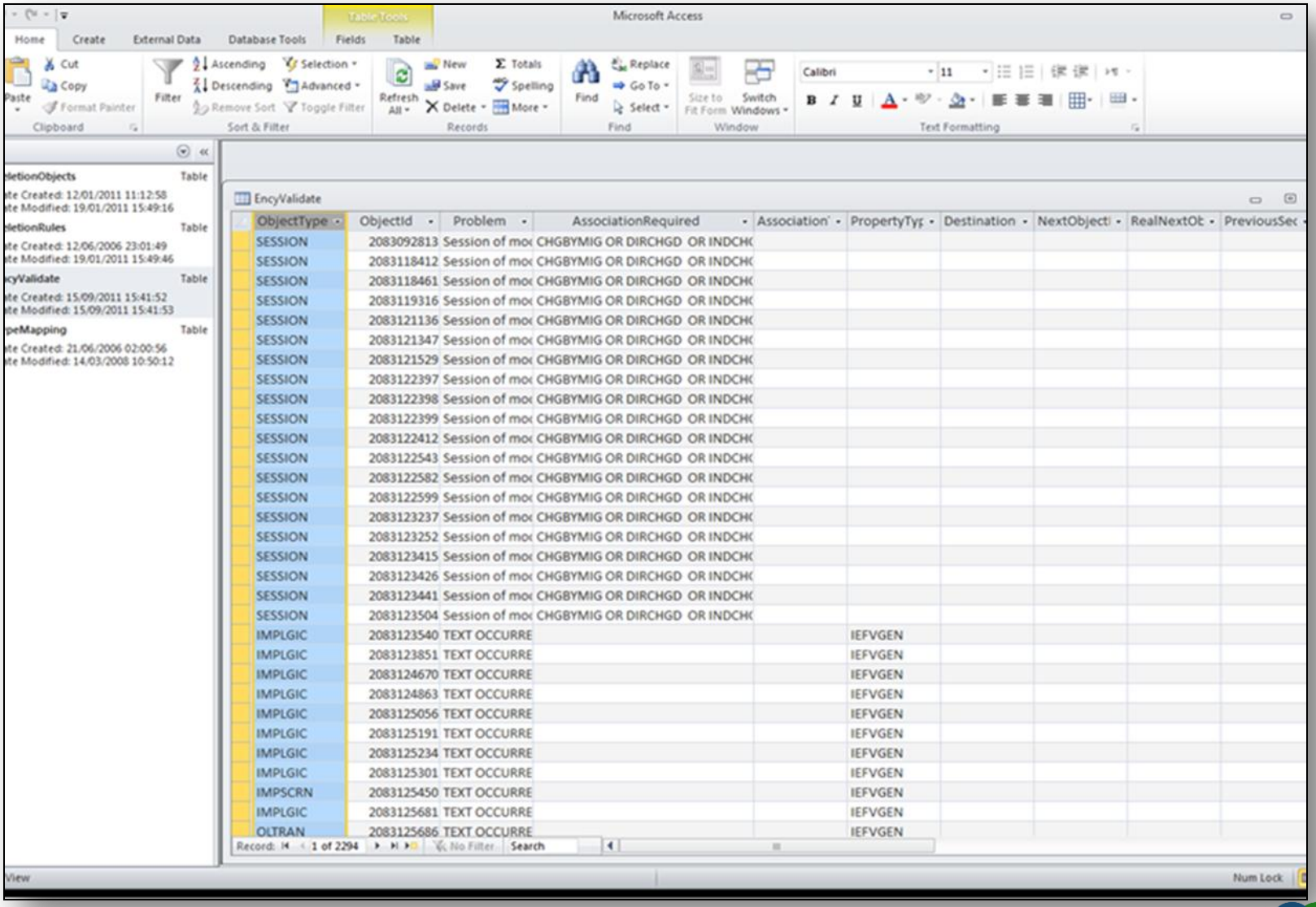
investigate / report



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planning

- Synchronisation with SDLC
  - Models will need to be checked in completely
- Prioritisation of fixes
  - Critical, Session, Needs Investigation
- Test against known models

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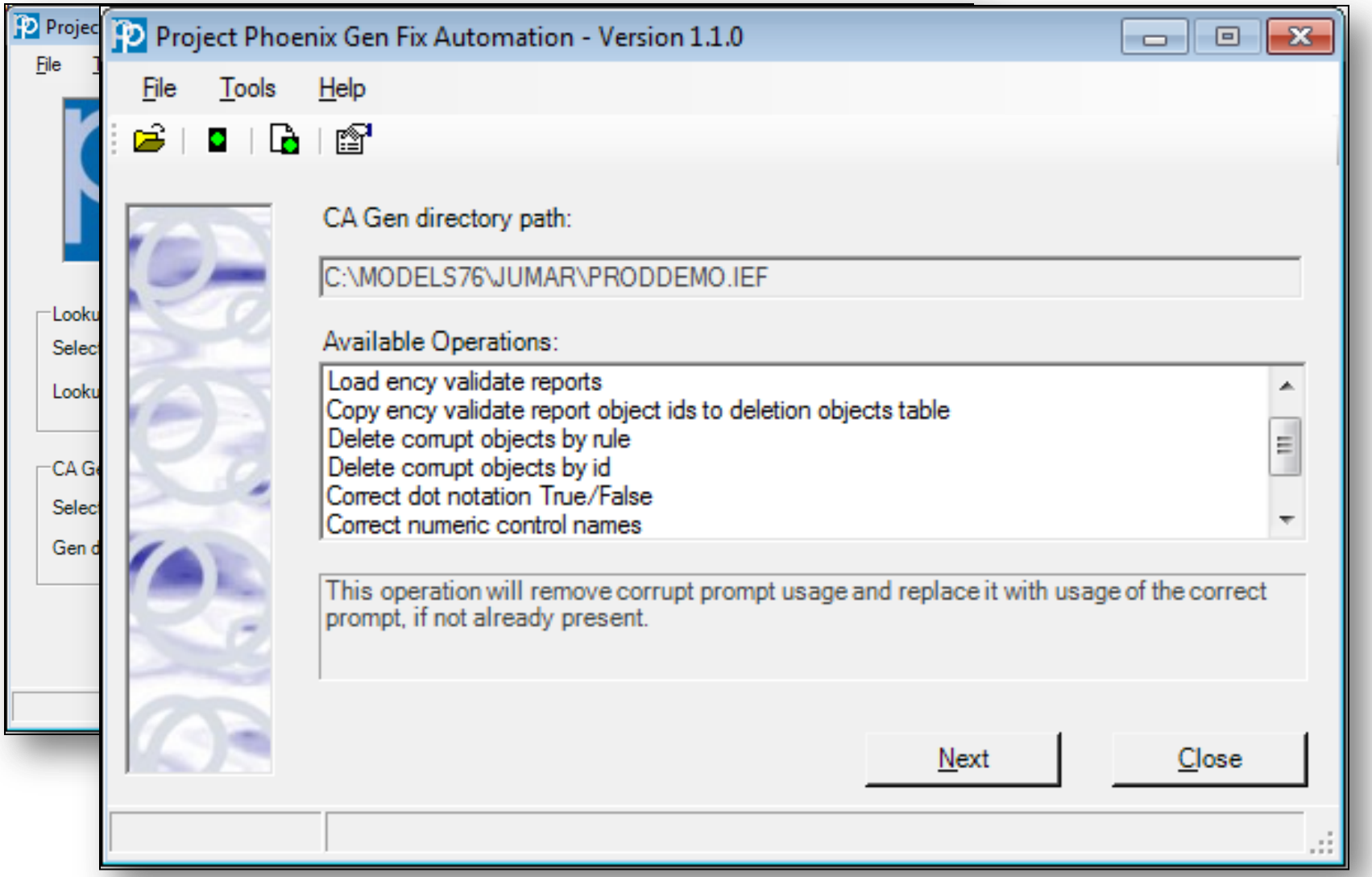
automated fix



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summary

- Corruptions have been with us all our “IEF lives”
- They can lie dormant for many years without any visibility
- Hit us when we really do not need the pain
  - Updating models or areas of models which have not been used for a period of time
  - During change programmes such as upgrade, modernisation, re-platforming

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next steps

- De-risk the uncertainty
- Get your models checked regularly as part of natural model management strategy
- Identify what is causing corruptions
  - Age of the models, Model management, 3rd party tools, in-house utilities
- Fix serious corruptions found
- Does your CA Gen model have corruption?
- Jumar now offer a free assessment of your Validation Report
  - We will provide a summary of issue types by model

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thank you

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