Cyest

Carbon Technology

An Overview

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Enterprise Modelling

One of Cyest Corporation's core business centres on doing economic modelling and optimisation of a business; so that management can understand the drivers of value in their business and the impact that changes will have on operational and strategic planning.

Through this experience of building complex models and the need for a robust enterprise modelling environment, Cyest Corporation therefore embarked on developing a multi-dimensional, object-orientated modelling environment, which would satisfy all requirements for a robust enterprise modelling environment. This modelling platform is called ***Carbon***.

What does *Carbon* do?

The ***Carbon*** software allows for an 'object' to be created to represent the building blocks of the business and relate them to each other. Within the model, each object 'behaves', both in operational and economic terms, precisely how its real world counterpart would. The ***Carbon*** software allows for the objects to represent real life scenarios; allowing enterprise planners to test many scenarios. Prevailing business conditions can be taken into consideration and there is the possibility to examine how that particular business could best be configured to achieve its goals.

How does *Carbon* work?

Built in C#, the platform is comprised of three components, namely:

- ***Carbon*$_{Logic}$** – the engine which contains the objects, business logic and calculates the model
- ***Graphite*** – the user environment used to build templates and models
- ***UIP*** – the user interface environment that is configured to function on top of templates and models, and which contains all the input and reporting components

About the *Carbon*$_{Logic}$ modelling engine

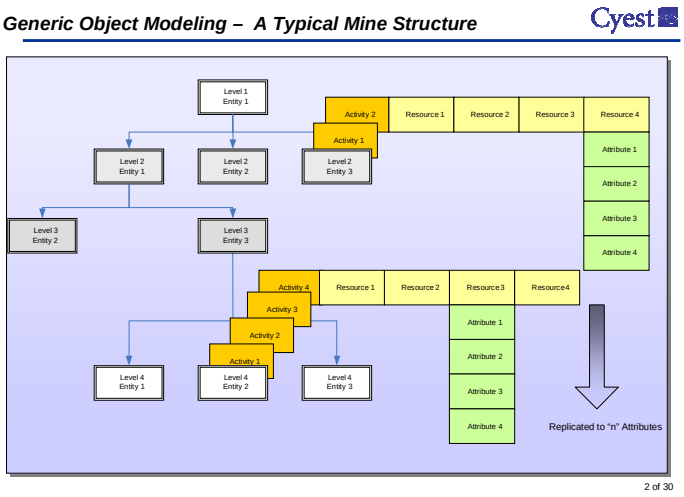
The real power behind ***Carbon*$_{Logic}$** lies not in its ability to simply create for example in a mining context entities, activities, resources and attributes but in its ability to interrelate all of them and allowing for precise details to be calculated.

An attribute such as the operating cost of a resource will vary according to what activity is consuming it and according to what production entity that activity is operating in. Using ***Carbon*$_{Logic}$** these differences can be accurately calculated.

Similarly, the economics of a production entity can be determined by the activities that occur within it. Using ***Carbon*$_{Logic}$** different scenarios comprising various activities can be tested in the same production entity to compare their differences. The output and cost of each activity will be affected by the resources they have available to them. By using ***Carbon*$_{Logic}$** the cost and productivity for each activity can be calculated before a 'real-life' decision is made.

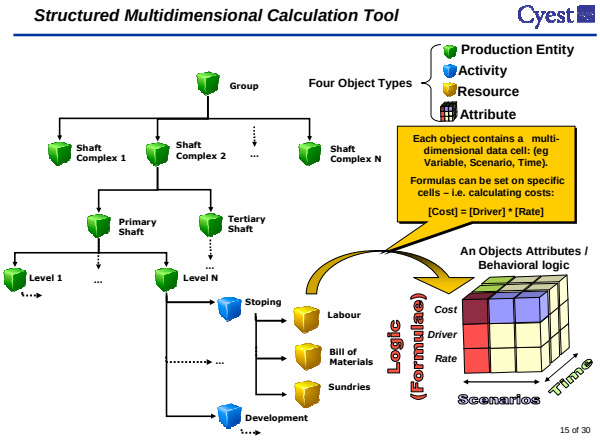
Moreover, the relationship between entities can be made to vary over time. ***Carbon**Logic* can calculate the efficiency of a team that has increased over the years and gained more experience, as well as calculate the wear and tear of a particular piece of equipment. (Wear and tear can also vary according to circumstances.)

Example: Generic Object Modelling – A Typical Mine Structure



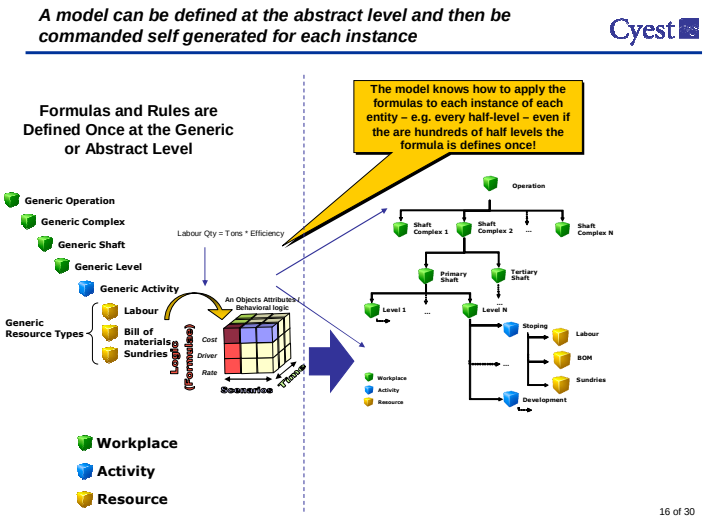
In this mining house scenario, the modelling object engine has been configured to represent shafts, activities, resources and attributes. However, for other industries it could be configured to reflect mining assets such as draglines, shovels, etc.

Example: Structured Multidimensional Calculation Tool



***Carbon**Logic* will allow for a single generic 'palette' of objects to be established. These can then be used to easily create any number of different configurations relating to the enterprise on the scenario 'canvas'.

Example:



What makes *CarbonLogic* an essential tool for an enterprise?**

The ***Carbon**Logic* platform, a programme that that allows a model to be built of any business, is integrated into existing enterprises to create a living model. The resultant object models are also fully auditable and Sarbanes-Oxley compliant. Most importantly, the modelling capability of the platform exceeds that of spreadsheet tools, and at the same time offers an intuitive and easy to use interface.

***Carbon**Logic* has the ability to handle large volumes of data; millions of rows as opposed to Microsoft Excel, which cannot exceed 65,000 rows of data. In this regard, the platform is more like an industrial database than a modelling platform.

***Carbon**Logic* integrates with live transactional data. This results in more detailed modelling parameters that self update as transactional reality changes.

With ***Carbon**Logic* rules and formulas are defined at the abstract entity level and the application of the formulas to specific levels occurs automatically allowing for significant speed gains in building models.

***Carbon**Logic* allows a user to build transparent models with maintainable rules.

Carbon$_{Logic}$ allows for sophisticated models to be easily built; enhancing flexibility in allowing people without software development knowledge to create and edit models, easily and efficiently

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