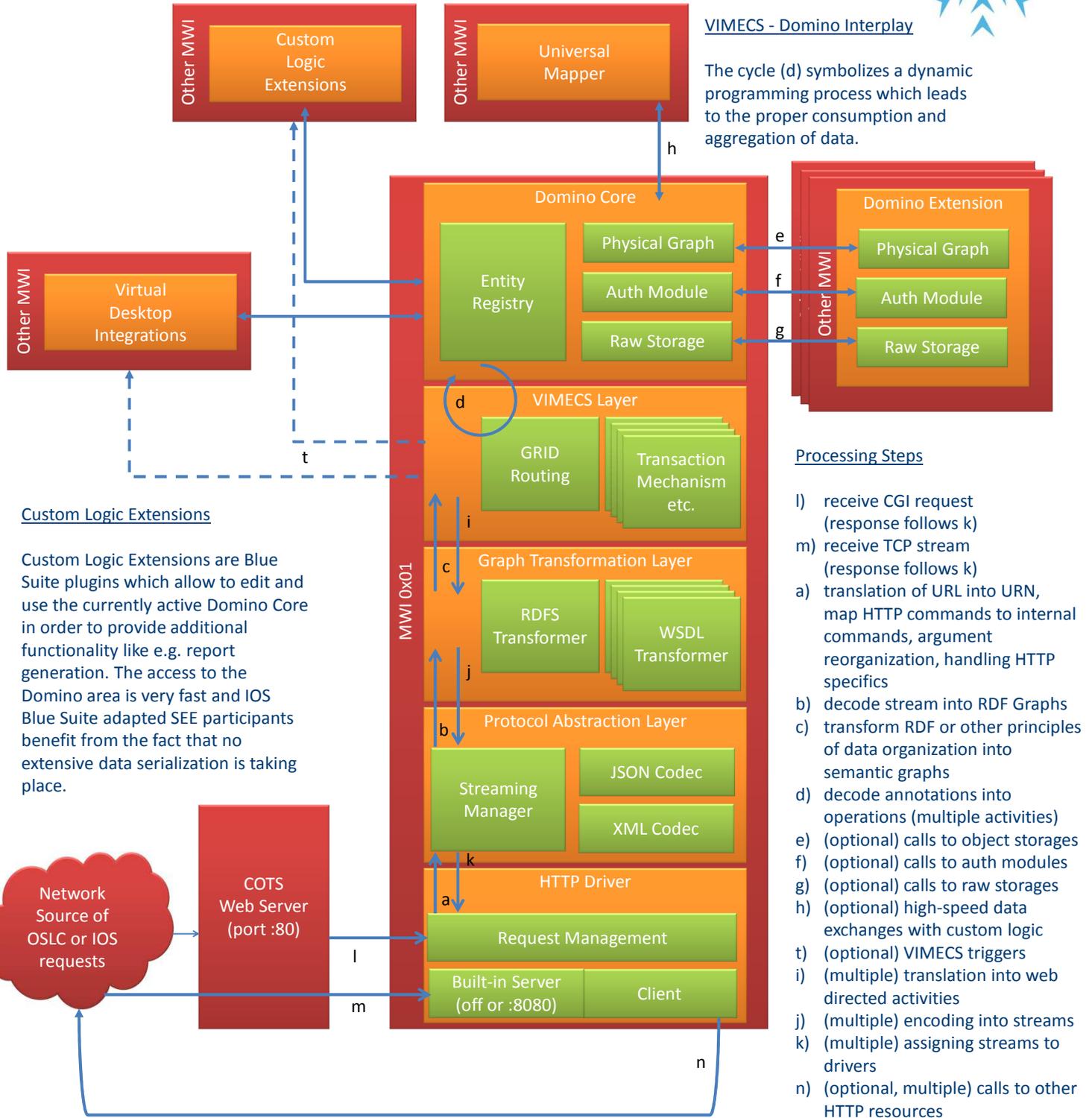


Understanding Data Transport in Blue Suite Adapters

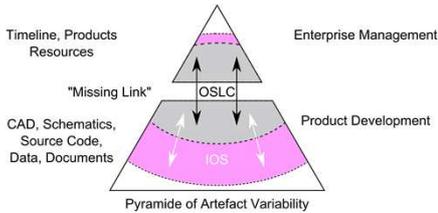
This poster attempts to visualize the workflow in IOS adapters based on the Blue Suite. At the very minimum the presented components will behave like conventional OSLC services and resources. However,

it is possible to enrich several components (green) during communication with configuration information which enables additional powerful features.



Development Environment Architecture (DEA) GRID

The new interoperability specification (IOS) developed by ARTEMIS does not intend to become a universal interoperability technology. Instead it concentrates on simplifying tool-chain setup and operation in context of Systems Engineering Environments (SEE).



Motivated by safety concerns and the required traceability the focus of CRYSTAL is to link together various levels of business, product and project management down to basic development artifacts.

The challenge in this endeavor is the complexity and ephemeral nature of the product development environment. These characteristics are at odds with enterprise management environments where some kind of eternal, additive and centralistic truth is aggregated. This high strangeness between the two areas makes building thorough traceability difficult to achieve (much manual effort and personal discipline required).

Moreover, inventing an interoperability technology for creating traces between different project items is by itself a relatively minor advance, anyway. The real benefit stems from employing the resulting structures for automatic or semi-automatic processes in order to reduce chances of human error and to gain higher levels of automation. Achieving these benefits seems to rely on two important features:

- 1) linkage follows a structurally reasonable layout suitable for automatism
- 2) linkage can be created with minor human inference

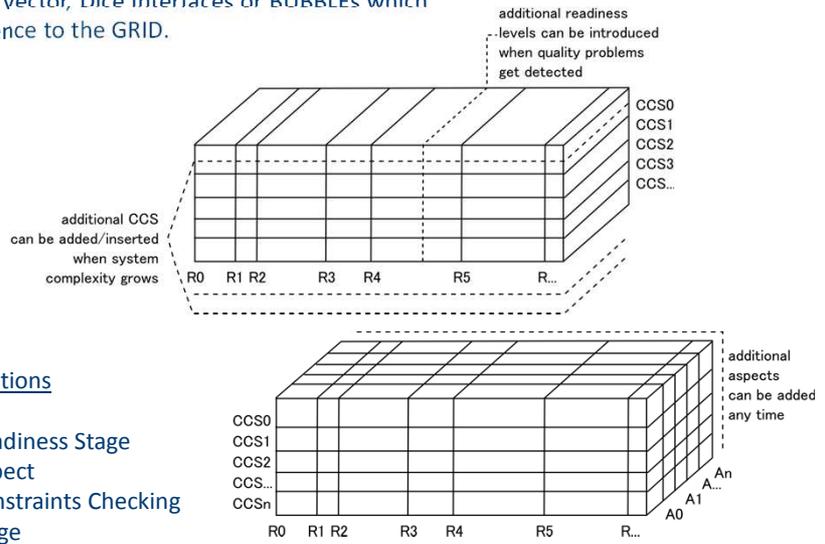
The Development Environment Architecture (DEA) is a new concept to be intrinsic to the IOS which is proposed to the standardization bodies of CRYSTAL. It allows to organize development artifacts on a project-specific GRID. The GRID supports meaningful automatic linkage between artifacts. The GRID is powerful enough to accommodate growing projects and growing product complexity dynamically. Tool-chains use GRID coordinates in order to identify the relevant data sources for them. A project configuration describes the technical means how to exchange data between GRID cubicles.

The GRID also offers a clean separation between different levels of abstractions, levels of

architecture and kinds of concern. Examples of such concerns are Quality Management and Safety.

Application of GRID results in several benefits: It allows to quickly compare different projects in terms of their tool-chain compatibility and allows a simple mapping of tool-chains between different projects, e.g. when parts of a project are outsourced.

Other important DEA concepts are Artifact Templates Vector, Dice Interfaces or BUBBLEs which take reference to the GRID.



Abbreviations

- R: Readiness Stage
- A: Aspect
- CCS: Constraints Checking Stage

