



Issue 2 (2nd edition)
February 2000

Welcome

This is the second of a series of newsletters that report progress on the development of the SC4 Data Architecture. ISO TC184/SC4 initiated this work as a Preliminary Work Item within WG10 in 1997; it is now moving towards development of a standard – New Work Item proposals for two initial parts are now being considered by the P-members of SC4.

New Work Item Proposals distributed for ballot

IIDEAS (“Integration of Industrial Data for Exchange, Access and Sharing”) refers to the new SC4 standard that is being developed as a result of the SC4 Data Architecture Preliminary Work Item.

The New Work Item Proposals for Parts 1 and 2 of the IIDEAS standard (ISO NP 18876-1 and -2) are now out for ballot. The New Work Item Proposal documents are available from SOLIS as document SC4 N971 and can also be downloaded from the IIDEAS web page. The NWIP ballot period starts on 2000-01-19 and closes on 2000-04-19.

We strongly encourage you to review and support these proposals, and to consider formal participation (i.e., as an expert nominated by your national standards body) in the development of these standards.

Relationship to other SC4 work

Background

WG10 was set up as the initial release of STEP was being published to address a number of

issues that had arisen from the development of STEP, PLIB, and MANDATE and to provide a long term technical vision for the work of SC4. The primary issues were:

- STEP Applications Protocols were sometimes found not to be interoperable, despite/because of the interpretation process. Whilst interoperability had not been a design objective of STEP, it was and is an industrial requirement, although it was not explicitly stated at the time in the rush to finish the initial release.
- STEP, ISO 15926 and PLIB use different paradigms to represent the world. For example, there is not a well-defined semantic relationship between Product, Part, and Physical_Object in these standards.
- There was significant overlap between AP’s. This was resulting in the same requirements being developed multiple times at additional cost. AP’s not realising their overlap with other AP’s was also a cause of interoperability problems.
- WG10 has spent considerable time (years) gaining an understanding of these problems and identifying what should be done as a remedy. The SC4 Framework, STEP Modularization, and SC4 Data Architecture projects are three activities addressing different aspects of these issues and the long-term vision.

Relationship to other initiatives

Whilst the SC4 Framework and Modularization project are focussed on STEP, and what can be done within the current STEP Methodology and Data Architecture, the SC4 Data Architecture project looks at cross-standard integration.

Modularization contributes to its objectives and provides a sound basis for e.g., a STEP Integration Model using the methods of the SC4 Data Architecture project.

Equally the SC4 Data Architecture project is designed to be capable of meeting the information requirements identified in the SC4 Framework and beyond. ISO 15926 also makes a significant contribution by being a large-scale integration model in its own right (STEP does not currently have an integration model, since the integrated resources are not fully instantiable). However, the modelling paradigms for the two standards are different, and work needs to be done to bring the two together. Considerable progress has already been made in this area.

Progress on EXIST

EXIST is a new language based on logic and set theory, that is being developed to support the demanding requirements of the IIDEAS architecture for support for modelling at different levels of abstraction, mapping, and rules in a declarative manner.

It is not yet clear whether the language will be standardised.

The language will be developed in a number of forms in parallel. These are a lexical form, an XML representation a graphical form, a meta-model, and an interface specification.

The main elements of the lexical language have been developed and include named objects, variables, name spaces, sets, tuples, relations, functions, operators, expressions, propositions, and assertions. At the same time examples of use of the language are being developed, including use for mapping. Substantial progress has also been made with the graphical form, whilst work on the meta-model has just started.

A paper on the language is being prepared for the PDT Europe 2K Conference to be held in The Netherlands in May 2000.

For further information please see the project website at <http://www.pdtsolutions.co.uk/iideas>, or contact:

Matthew West
Operations & Asset Management
Shell Services International
Shell Centre
London SE1 7NA
UK
Email: Matthew.R.West@is.shell.com

Presentation in Melbourne

No technical meetings of the SC4 Data Architecture PWI are planned for the Melbourne meeting. However, a presentation on the results of the project and the New Work Item Proposals recently circulated for ballot will be given on Wednesday, 2000-02-16, from 1030 to 1200.

Experts from all of SC4's working groups are invited to attend and to use this session as an opportunity to ask questions about IIDEAS and explore how existing SC4 standards can integrate with and exploit the IIDEAS architecture.

Future meetings

As we explained in our first newsletter, most of the technical work of the SC4 Data Architecture project has been done in workshops held between the main meetings of the working groups of ISO TC184/SC4.

The SC4 Data Architecture project will continue this way of working. A workshop has therefore been provisionally scheduled for the week starting May 15, 2000 in London, UK. **This date has been changed by one week from details given in the 1st edition of this issue, as distributed at the Melbourne meeting.** Confirmation of this date and venue, and details of the meeting agenda, will be circulated by the SC4 Secretariat and published on the IIDEAS web page.

Julian Fowler
PDT Solutions
Belle Vue Barn
Mewith Lane
Bentham LA2 7DQ
UK

Email: jfowler@pdtsolutions.co.uk