



## **IFC R2.0 CERTIFICATION WORKSHOP**

**MAY 23<sup>rd</sup> 2001 SOPHIA ANTIPOLIS, FRANCE**

### **Minutes**

#### **Agenda**

1. **Welcome and Opening of the Workshop**
2. **Introduction to IFC Certification**
3. **Demonstration of Certification Methodology**
4. **Introduction of the Candidate Software**
5. **Demonstration of IFC R2.0 Exchange by each Candidate**
6. **Open Session for Testing**
7. **Conclusion**



### Attendance

Name	Company	Role
1. Juha Hyvärinen	VTT	MSG, Facilitator
2. Arto Kiviniemi	VTT	IC dept.chair, Evaluator
3. Patric Houbaux	CSTB	Host, Evaluator
4. Kari Karstila	Eurostep	MSG
5. Yoshinobu Adachi	VTT / Secom	MSG
6. Bruno Slama	FS chapter	FS chairman
7. Bernard Ferries	Laurenti	FS Techn. Coordinator
8. Jiri Hietanen	Solibri	BLIS Techn. Coordinator
9. Richard See	Microsoft	
10. Jean Pierre Bedrune	Laurenti	
11. Roland Billon	Mediaconstruct	
12. Kevin Yu	Timberline	
13. Reijo Hänninen	Olof Granlund	
14. Adina Jagbeck	Skanska	
15. Jarmo Laitinen	YIT	
16. Eric Piewezzen	Robo Bat	
17. Heikki Kulusjärvi	Solibri	
18. Francois Rocca	Rocca	
19. Serge Ourties	Labeo Abyla Diffusion	
20. Til Breton	A.Til.A-diffusion	
21. Benoit Bisiaux	Pictogramme	
22. Guillaume Picinbono	CSTB	
23. Florent Coudret	CSTB	
24. Samuel Yonnet	CSTB	
25. Werner Keilholz	CSTB	
26. Patrice Poyet	CSTB	
27. Janos Maros	Graphisoft	
28. Tero Hemiö	Eurostep	
29. Hannu Lahtela	Olof Granlund	
30. Frederic Grand	BBS Slama	
31. Gjula Kiss	Graphisoft	
32. Eric Lebegue	Graitec	



### 1 Welcome and Opening of the Workshop

Patrick Houboux wished the attendants welcome to CSTB and introduced the IAI officials present.

Juha Hyvärinen opened the Certification Workshop at 10.15 a.m.

### 2 Introduction to IFC Certification

Kari Karstila presented the general principles of IFC R2.0 Certification of Facilitated Approval [1], and informed about the modifications made to the IFC 2.0 Schema [2, 3, 4].

Jiri Hietanen presented the View Definitions [5] and Test Cases [6] developed by the BLIS-project to be used in this certification workshop.

The Views are defined for the following use cases:

1. Arch. design >> Quantities take off
2. HVAC system design >> Quantities take off
3. Arch. design >> Thermal load calculations / HVAC system design
4. CAD / Visualization

### 3 Demonstration of Certification Methodology

The testing procedure followed during the previous day before the open workshop was explained by Richard See [7]. Each read-type application had been tested against all import test cases, and results had been document on a score card per each application [8]; the evaluation had been done by comparing the data appearing on the application user interface with the reference data in test case documentation (toolkit/server type of candidates were tested by viewing data through an client application).

Similarly, each write-type application had been tested for import/export scenario, and results had been documented. The export files were checked using software tools for 1) Part 21 file syntax and schema conformance checking, as explained and demonstrated using ECCO tool by Juha Hyvärinen, and 2) for compliance with view definitions and differences to input data, as explained and demonstrated by Patrick Houboux [9].

The evaluation was done by Juha Hyvärinen, Arto Kiviniemi and Patrick Houboux.



## 4 Introduction of the Candidate Software

Application name and version	Company	Application type	Candidate view(s) #	IFC Read/Write
IFC VRML Converter Version 1.0	TOPS Software Corp.	IFC R2.0 geometry to VRML converter	4	Read-only
ComCheck EZ	PNNL		3	Read only
WebSTEP 0.5	Eurostepsys Oy	Product model web server	1,2,3,4	Toolbox/Server
IFC Model Exchange Add-on to Visio Professional - Version = 2002	Microsoft Corporation	Drawing and diagramming	1,2,3,4	Read/Write
EnergyPlus IFCtoIDF	LBLN	IFC import to EnergyPlus simulation	3	Read only
Facets	Skanska	Quantity takeoff, Cost estimating	1,4	Read only
Solibri Model Checker	Solibri, Inc.	Design spell checking	1,4	Read only
BSPro	Olof Granlund	COM-server for IFC-files	3,4	Toolbox/Server
RIUSKA	Olof Granlund	Building Energy Simulation	3	Read only
COVE	YIT	Quantity takeoff, Cost estimating	1,4	Read only
ArchiCAD 6.5/7.0	Graphisoft R&D	Architectural CAD	1,3,4	Read/Write
IFC Viewer	Claire project	IFC Viewing	4	Read only
IFC Model Viewer	Commonwealth Science & Industrial Research Organization	3D viewing and browsing of IFC models	4	Read only
PECAD V1.0	Timberline Software Corporation	Quantity takeoff, Cost estimating	1,2	Read/Write

Information sheet of each candidate application is available in [10].

## 5 Demonstration of IFC R2.0 Exchange by each Candidate

Each Candidate demonstrated exchange with one the Test Case Buildings.

Lunch break at 12:45

Continued at 14:15



### 6 Open Session for Testing

The audience was invited to challenge any of the Candidates to demonstrate further their IFC R2.0 exchange.

No requests for further demonstration were made.

Patrice Poyet raised a question about the criteria to select the particular buildings as test cases, and to what extent they covered the defined views. In the discussion it was concluded that even though the test cases do not completely cover the views, they represent a meaningful subset. Also, in time more test cases will be developed, and each certification will be made using the most comprehensive set of test cases available at that time; also the vendors whose applications are certified now are strongly encouraged to test against new test cases as they come available. The need to develop test cases especially for toolkit/server type of software was recognised.

### 7 Conclusion

No problems appeared during the open workshop demonstrations.

The results of the comprehensive testing done the day before were presented. Based on these results, several of the candidates needed to clarify some issues before they could be certified. Also, checking the export case test files was still pending (this was done directly after the workshop), and therefore the following decision was made:

**Decision: All the candidates are eligible for certification, but those having open issues must solve them and provide satisfactory response to the facilitator before 8 June 2001. After that date, the results of this workshop will be recorded and announced.**

No dissenting views were expressed.

The results of the workshop are recorded in  
IFC\_R20\_CertificationWorkshop\_23-May-2001\_Results.pdf [11]

The Workshop was closed at 15:30.



## References

1. IFC R2.0 Certification of Facilitated Approval. IAI, 2001. 6 p.
2. IFC Release 2.0 specification. 1999. IAI Member CD, International Alliance for Interoperability. 1999-03-15.
3. IFC Release 2.0 Certification testing – Schema refinement. 2001. 33 p.
4. IFC20\_longform\_Conformance\_V10.exp
5. BLIS View definitions for IFC R2.0 at <http://www.blis-project.org>
6. Test cases for IFC R2.0 at <http://www.blis-project.org>
7. IFC\_R20\_CertificationWorkshop\_23-May-2001\_TestScenarios.pdf
8. Template\_CertificationEvaluation\_23-May-01.pdf
9. overview\_model\_checking\_software\_v1.pdf
10. IFC\_R20\_CertificationWorkshop\_23-May-2001\_Candidates.zip
11. IFC\_R20\_CertificationWorkshop\_23-May-2001\_Results.pdf