



## **CIMOSA History**

**1984 – 2009**

by

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### **Part 1 ESPRIT Project AMICE**

*developed in 4 consecutive projects by consortia with up to 33 participating organisations*

**1984 – 1994**

<i>Date</i>	<i>Work Items</i>	<i>Main results</i>
1984	<b>ESPRIT</b> (European Strategic Programme for Research in Information Technology), 1 <sup>st</sup> Call for Proposals on CIM Architectures	proposals submitted by 4 consortia, European Commission recommendation: resubmit joined proposal
1984 - 1985	<b>AMICE</b> (European CIM Architecture) ESPRIT Project 688; Project definition phase	Techn. Report: Project organisation, CIM Architecture basic concepts, Standardisation
1985 - 1989	AMICE - ESPRIT Project 688: Project development Phase I Publication	Project Deliverables: Architecture Description 1.0  CIMOSA AMICE (Eds.), “ <i>Open Systems Architecture for CIM</i> ”, Springer-Verlag, 1989 (Japanese translation 1993)
1989 - 1990	AMICE - ESPRIT Project 2422: Project development Phase II Standardisation	Project Deliverables: Architecture Description 1.1  CEN ENV 40003:1990 “ <i>Framework for Enterprise Modelling</i> ”
1990 - 1991	AMICE - ESPRIT Project 5288: Project development Phase III Publication	Project Deliverables: Architecture Description 1.1  AMICE (Eds.) “ <i>Open Systems Architecture for CIM</i> ”, 2 <sup>nd</sup> Edition, Springer-Verlag; 1991
1991 - 1994	AMICE - ESPRIT Project 7710: Project development Phase III/P  Cooperations   Publications	Project Deliverables: Project final report, CIMOSA Technical Baseline 3.0, 1994, Pilot implementation and demonstration of CIMOSA at WZL, Aachen/Germany, 1994 <b>SIG-CCVP</b> (Special Interest Group - Cooperation for CIMOSA Validation and Promotion) with ESPRIT Projects AMICE, CIMPRES, CODE and VOICE  <b>Europe – USA cooperation</b> with 4 Workshops: Europe 2, USA 2 and International Conference <b>ICEIMT’92</b> (Intern. Conf. Enterprise Integration and Modeling Technology), at Hilton Head/USA, ICEIMT’92 Proc., Petrie (Ed), “ <i>Enterprise Integration Modeling</i> ”, MIT, 1992 “ <i>CIMOSA: Offenen System Architektur</i> ”, K. Kosanke, (in German), in Handbuch Informationsmanagement, A.W. Scheer (Ed), Gabler, 1993



## Part 2 CIMOSA Association 1994 – 2009

### CIMOSA Association e.V (COA): AMICE follow-on, non-profit organisation for promotion and enhancement of CIMOSA

<i>Work Items</i>	<i>Main results</i>
<b>CIMOSA Workshops</b>	<p>8 own and 18 European project related workshops organised (see below for EU project workshops):</p> <p>“Business re-engineering”, 1994, WZL, Aachen/Germany          “Modelling and Simulation Tools”, 1995, WZL, Aachen/Germany          “Business Process Mgmt. Based on CIMOSA” 1995, Offenburg/Germany          “CIMOSA Advances”, 1995, Brussels/Belgium          “Mapping of architectural approaches”, 1995, Stuttgart/Germany          “Process Modelling for Enterprise Integration with CIMOSA”,          1996, Loughborough/UK          “Constructs for Enterprise Modelling”, 1996, Brussels/Belgium          “Virtual Factory”, 1996, Zurich, Switzerland          in cooperation with ITEM, St. Gallen/Switzerland</p>
<b>CIMOSA News</b> ISSN 1618-1638	17 Volumes, total of 50 Issues distributed by mail Europe wide and published on CIMOSA website, M. Zelm (Ed)
<b>CIMOSA Website</b> ( <a href="http://www.cimosa.de">www.cimosa.de</a> )	3 Categories of CIMOSA related documents: Modelling, ICT Support for Modelling, Standardisation. Current status: 300 documents (full reports and reviews), 12.000 visits per month (average 2006-2009)
<b>CIMOSA Publications</b>	<p>12 Publication in books and national/international Journals including special issues (conference proceedings not included):</p> <p>“CIMOSA – Overview and Status”, K. Kosanke, and “CIMOSA business modelling process” M. Zelm et al, in <i>Computers in Industry</i>, Vol. 27, Nr. 2, 1995;          “Validation of CIMOSA”, special Issue, T. Gransier, W. Schönewolf (Eds)          “CIMOSA – Life-Cycle Based Enterprise Integration”, K. Kosanke, F.B. Vernadat, in <i>Handbook of Life-Cycle Engineering</i>, 1998  <i>Computers in Industry</i>, Vol. 40, Nr 2-3, 1999 “CIMOSA – Evolution and Application in Enterprise Engineering and Integration”, special issue, K. Kosanke et al (Eds.)          “Enterprise Integration: Building international Consensus; Current State and Recommendation for the Future”, (in Polish), K. Kosanke, in <i>Pomiriary, Automatyka, Robotyka</i>, 1999          “An Initiative for International Consensus on Enterprise Inter- and Intra-Organisational Integration”, K. Kosanke, in <i>Informa Wydział Informatyki Politechniki Szczecińskiej, Szczecin, Poland</i> 2002          “Geschäftsprozessmodelle für Wissensmanagement und Entscheidungsunterstützung“, (in German), K. Kosanke, M. Zelm, in <i>Industrie Management</i>, 2002          “Enterprise Inter- and Intra-Organisational Integration”, K. Kosanke, in <i>Supply Chain Optimisation</i>, A. Dolgui, J. Soldek, O. Zaikin (eds)          “Resource Requirements of Enterprise Management”, M. Zelm in <i>Handbook on Enterprise Architecture</i>, P. Bernus, L. Nemes, G. Schmidt (eds), 2003          “Benutzernahe Modellierung und Modellaustausch mit UEML”, (in German), K. Mertins, T: Knothe, M. Zelm, in <i>Industrie Management</i>, 2004          “Standardisation in Enterprise Inter- and Intra-organisational Integration” K. Kosanke, in <i>JIT Standards &amp; Standardisation Research</i> Vol. 3/2, 2005          “Towards User-oriented Enterprise Modelling for interoperability”, M. Zelm et al, in <i>Advanced Topics in Database Research</i>, Vol. 4, 2005          “DIN EN 62264 – die neue Norm zur Interoperabilität von Produktion und Unternehmensführung”, (in German), M. Zelm et al, in <i>ATP (Automatisierungstechnische Praxis)</i>, Vol. 5, 2007</p>



*Part 2 continued*

<p><b>CIMOSA Presentations</b></p>	<p>Over 50 papers presented at 43 national, European and international conferences:</p> <p><u>10<sup>th</sup> CIM-Europe'94</u>, Copenhagen/Denmark, <u>IMSE'94</u>, Grenoble/France, <u>CALS'96</u>, Los Angeles/USA, <u>IFIP'96</u>, Heron Island/Australia, <u>ICARCV'96</u>, Singapore, <u>DIISM'96</u>, Katsheuvel/Netherlands, <u>IFAC World Congress 96</u>, San Francisco/USA, <u>ASI'96</u>, Toulouse/France, <u>IFAC Workshop-MIM'97</u>, Vienna/Austria, <u>IEEE SMC '98</u>, San Diego/USA, <u>14<sup>th</sup> IIM-Europe '98</u>, Göteborg/Sweden, <u>INCOM'98</u>, Nancy/France, <u>EURISCON'98 &amp; SOFTCOM'98</u>, Athens/Greece, <u>Technology Ventures Congress'98</u>, Glasgow/UK, <u>ASI'98</u>, Bremen/Germany, <u>IMS'99</u>, Leuven/Belgium, <u>INTERKAMA-ISA-TECH'99</u>, Düsseldorf/Germany, <u>14<sup>th</sup> IFAC World Congress 99</u>, Beijing/P.R. China, <u>3<sup>rd</sup> ICSC'99</u>, Genova/Italy <u>Know Tech'2000</u>, Leipzig/Germany, <u>ITC'2000</u>, Nimes/France, <u>ASI'2000</u>, Bordeaux/France, <u>IEEE/IFIP BASIS'2000</u>, Berlin/Germany, <u>e-2000</u>, European eBusiness &amp; eWork, Madrid/Spain, <u>Know-Tech'2001</u>, Dresden/Germany, <u>e-01 European eBusiness &amp; eWork</u>, Venice/Italy, <u>INCOM'01</u>, Vienna/Austria, <u>IEEE SIIT'01</u>, Boulder/USA, <u>IFAC-MOSIM'01</u>, Troyes/France, <u>Düsseldorfer Produktionstage'01</u>, Düsseldorf/Germany, <u>PRO-VE'02</u> Sesimbra/Portugal, <u>Production Systems design, supply change mgmt. and logistics'02</u>, Miedzyzdroje/Poland, <u>10<sup>th</sup> ICE'03</u>, Madeira/Portugal, <u>CAiSE*04</u>, Riga, Latvia, <u>ICEIMT'04</u>, Toronto/Canada, <u>11<sup>th</sup> ICE'05</u>, Munich/Germany, <u>I-ESA'05</u>, Geneva/Switzerland, <u>IFAC'05</u>, Prag/Czech Republik, <u>EDOC'05</u>, Enschede/The Netherlands, <u>I-ESA'06</u>, Bordeaux/France, <u>PRO-VE'06</u>, Helsinki/Finnland, <u>IMS'07</u>, Zürich/Switzerland, <u>I-ESA'08</u>, Berlin/Germany</p>
<p><b>CIMOSA Applications</b></p>	<p>FIAT-Auto (Re-engineering of Assembly Operations), 1998,        Several German SMEs (Production shop floor), 1998        Seaport logistics process modelling with tools from Interfacing Technologies, 2009 (<a href="http://www.efforts.project.org">www.efforts.project.org</a>)</p>
<p><b>Standardisation participation in national, European and international SDOs:</b></p> <ul style="list-style-type: none"> <li>- ISO TC 184 SC5/WG1</li> <li>- CEN TC 310/WG1</li> <li>- DIN/NAM 430.0 (NA 060-30-05)</li> <li>- DKE 931.0.2</li> <li>- ISO TC 184 SC5/WG9</li> </ul>	<p>CEN ENV 12204:1996 “<i>Constructs for enterprise modelling</i>”        ISO 14258:1997 “<i>Concepts and rules for enterprise models</i>”        ISO 15704:1998 “<i>Requirements for enterprise-reference architecture and methodologies</i>” IFAC/IFIP Task Force results as annex        CEN ENV 1350:1998 “<i>Enterprise model execution and integration services</i>”        CEN/ISO 19439:2002 “<i>Framework for enterprise modelling</i>”        IEC/ISO 62264-1 to -5: 2003 “<i>Enterprise-control system integration</i>”        CEN/ISO 19440: 2005 “<i>Constructs for enterprise modelling</i>”        CEN/ISO 11354-1 to 3: 2009 “<i>Requirements for establishing manufacturing enterprise process interoperability</i>”        ISO 22400-2 “<i>Key performance indicators (KPIs) for manufacturing operations management</i>”</p>
<p><b>IFAC/IFIP Task Force</b></p>	<p>GERAM “Generic Enterprise Reference Architecture and Methodologies” 1998</p>
<p><b>International Working Groups</b></p>	<p>IFIP TC5 WG 5.5/5.8/5.12        IFAC TC 5.3</p>
<p><b>Intern. Journals - Editorial Board Member</b></p>	<p>Intern. Journal of CIM, Taylor and Francis, (<a href="http://www.informaworld.com/">www.informaworld.com/</a>)        Intern. Journal of IT Standards &amp; Standardisation Research, Idea Group Publishing, (<a href="http://www.idea-group.com/">www.idea-group.com/</a>)</p>



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<b>European Projects</b>	<i>Main results</i>
<p><b>CIMOSA-PES</b> (Promotion and Evolution Support), ESPRIT Project (EP) 9814 (COA prime contractor)</p> <p><i>Publications</i></p>	<p>1995-1996, 4 Workshops in Europe</p> <p>CIMOSA Technical Baseline 3.2, 1996            “CIMOSA – a primer on key concepts, pupose and business value”, 1996            “CIMOSA Modelling” a computer assisted tutorial, 1996</p>
<p><b>DARIF</b> (Methods and Tools for Decentralised Work and Information Structures based on Business Processes), German BMFT project (COA expert partner)</p>	<p>1996-1998, several SME prototypes, demonstrating process design and utilisation, knowledge mgmt. and internet-based business process operation</p>
<p><b>EI-IC</b> (Enterprise Integration - International Consensus), EP 21.859, (COA prime contractor) (cooperation with NIST, USA)</p> <p><i>Publications</i></p>	<p>1996-1998, 5 preparatory workshops: Europe 2, USA 3  <b>ICEIMT’97</b> (Intern. Conf. Enterprise Integration and Modelling Technology), Turin, Italy,            5 post conf. workshops: Brussels/Belgium, Berlin/Germany, Paris/France, Turin/Italy, Glasgow/UK  <b>ICEIMT’97</b> Proc., “Enterprise Engineering and Integration”, K. Kosanke, J. G. Nell (Eds), Springer1997</p>
<p><b>EI3-IC</b> (Enterprise Inter- and Intra-Organisational Integration - International Consensus), IST 2001-92039, (COA prime contractor) (cooperation with NIST, USA)</p> <p><i>Publication</i></p>	<p>2001-2002, 4 Workshops: Asia 1, Europe 2, USA 1,  <b>ICEIMT’02</b> (Intern. Conf. Enterprise Integration and Modelling Technology), Valencia, Spain    <b>ICEIMT’02</b> Proc., “Enterprise Inter- and Intra-Organisational Integration”, K. Kosanke et al (Eds), Kluver2003</p>
<p><b>UEML</b> (Unified Enterprise Modelling Language), IST Project 2001-43229 (COA partner)</p>	<p>2002-2003 Specification of core constructs to support the UEML language and to serve as a basis for modelling interoperability in network of enterprises</p>
<p><b>INTEROP-NOE</b> (Interoperability Research for Networked Enterprises Applications and Software - Network of Excelence), NoE Project IST 2003, 50811 (COA partner)</p> <p><i>Publication</i></p>	<p>2001-2007, Research Results on interoperability in the areas of methods, models and tools, architectures and platforms, knowledge management, metadata and ontologies, standards, <b>I-ESA</b> (Intern. Conf. “Interoperability of Enterprise Software and Applications”    <b>I-ESA</b> Conf. Proc. “Interoperability of Enterprise Software and Applications” in Geneva, 2005, Bordeaux, 2006, Madeira, 2007</p>
<p><b>INTEROP-VLab</b> (Virtual Laboratory) (<a href="http://www.interop-vlab.eu/">www.interop-vlab.eu/</a>) with <b>DFI</b> (Deutsches Forum für Interoperabilität) German partner of Vlab (COA partner) (<a href="http://www.dfi-ev.de">www.dfi-ev.de</a>)</p> <p><i>Publication</i></p>	<p>2007-2010, <b>INTEROP-NoE project follow on organisation</b>, focussing on EI/SOA architectures and ontologies, knowledge management, EI practices, dissemination and standards, <b>I-ESA</b> (Intern. Conf. “Interoperability of Enterprise Software and Applications”    <b>I-ESA</b> Conf. Proc. “Interoperability of Enterprise Software and Applications” in Berlin, 2008, Beijing, 2009, Coventry, 2010</p>