Fully Communication Oriented
Information Modeling

chronological overview

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1   Fully Communication Oriented Information Modeling

The following articles were published and handed out at
conferences. They describe the steps made advancing from
traditional NIAM towards the current FCO-IM. In chronological
order:

1992   Objecten zijn in feite feiten
        Harm van der Lek, Guido Bakema
        internal Atos Origin publication
        Dutch article

1992   De unificatie van objecttypen en feittypen, een
        praktisch en didactisch vruchtbare theorie
        Harm van der Lek, Guido Bakema, Jan Pieter Zwart
        Dutch article
        published in Informatie

1993   The unification of object types and fact types, a
        practical and didactical fruitfull theory
        Harm van der Lek, Guido Bakema, Jan Pieter Zwart
        English article (translated)
        handed out at NIAM-ISDM conference

1993   Het groeperingsalgoritme in een
        communicatiegeoriënteerde aanpak
        Harm van der Lek
        Dutch article
        written for HAN University

1994   Fully Communication Oriented NIAM'
        Harm van der Lek, Guido Bakema, Jan Pieter Zwart
        English article
        (working papers of NIAM-ISDM conference)

1992   Natuurlijke taal Informatie Analyse Methode: een
        overzicht
        Harm van der Lek
        Dutch article
        written for HAN University
        (also published in Handboek Database Systemen, 1993)

1994   Label type extensions
        Han Schouten
        Several articles

2   FCO-IM Formalisation

The articles describe formalisations in respect to the FCO-IM methodology.

1993   On the structure of an Information Grammar
        Harm van der Lek
        English article
        HAN University
        (also published in working papers of NIAM-ISDM
        conference, 1994)

1997   Formalisation of FCO-IM
        Emile ter Horst
        English report
        KUN University graduation project at Atos Origin uso
        Harm vd Lek

3   FCO-IM Books

Available books on FCO-IM methodology

1994   Volledig Communicatiegeoriënteerde
        Informatiemodellering en Relationeel Database Ontwerp
        Susanne Willemsen
        Draft
        HAN University graduation project uso Guido Bakema

1996   Volledig Communicatiegeoriënteerde
        Informatiemodellering
        Guido Bakema, Jan Pieter Zwart, Harm van der Lek
        Dutch book
        TenHagenStam

1999   Fully Communication Oriented Information Modeling
        Guido Bakema, Jan Pieter Zwart, Harm van der Lek
        English syllabus
        FCO-IM Consultancy

1996   FCO-IM opgavenbundel
        Jan Pieter Zwart
        Dutch
        HAN University in Dutch

1999   'FCO-IM exercises'
        Jan Pieter Zwart
        Translated
        HAN University in English

2000   Fully Communication Oriented Information Modeling
        Guido Bakema, Jan Pieter Zwart, Harm van der Lek
        Special course edition for Albania
        Publishing House 'Camaj-Pipa, Albania

2001   Volledig Communicatiegeoriënteerde
        Informatiemodellering, Opgaven en casussen
        Marco Engelbart, Rob Arntz, Jorg Janssen
        Dutch book
        TenHagenStam

4   FCO-IM repository

The repository storing all FCO-IM related information has had some work in the years to complete. (Note it'll never be really complete since theory progresses every day and push the methodology and repository forward.)
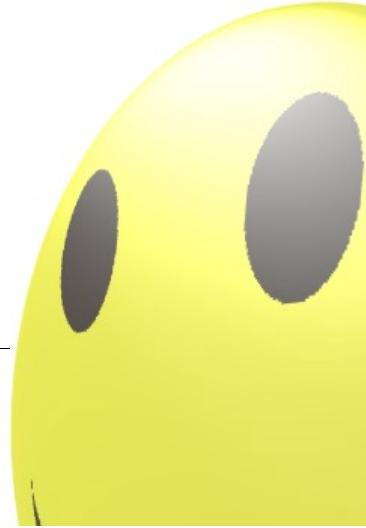
?   Communicatiegeoriënteerde Informatiemodellering en
        CASE-architectuur
        Frank Borghans, Michel Teunissen, Susanne Willemsen,
        Henri Heijltjes
        successive versions of course material
        as HAN University student assistants uso Guido Bakema

1994   Proposal for an FCO-IM Generic Meta Grammar
        Guido Bakema, Han Schouten
        English paper
        NIAM-ISDM group

1995   Inventarisation of constraints on the FCO-IM Generic
        Meta Grammar
        Henri Heijltjes
        as HAN University student assistant

1995   FCO-IM Casetool repository
        Guido Bakema, Jeanot Bijpost
        implemented in Ascaris FCO-IM Casetool
        Ascaris Software + FCO-IM Consultancy

1997   FCO-IM automodel
        Guido Bakema, Joost Nunnink
        FCO-IM Consultancy

5   FCO-IM tools

All tools in overview created from prototypes up to full
commercially available editions.

1991   FCO-IM CASE-tool version 0
        Harm van der Lek, Harm Brumsen
        for VPT-project

1992   FCO-IM CASE-tool version 1
        Guido van Bommel, Frank Borghans, Michel Janssen,
        Jean Paul Koster
        as HAN University student assistants uso Guido Bakema

1993   FCO-IM CASE-tool version 2
        Frank Borghans, Michel Teunissen
        documentation in Dutch
        HAN University graduation project uso Guido Bakema

1994   FCO-IM CASE-tool version 3
        Jeanot Bijpost, Michel Hoek
        documentation in Dutch
        HAN University graduation project uso Leo Wiegerink
        and Guido Bakema

1996   FCO-IM Casetool version 4.0
        Ascaris Software

1997   Commit
        TLO Holland Controls
        Partial FCO-IM support

1997   FCO-IM Casetool version 4.1
        Ascaris Software

2002   CaseTalk
        Successor of FCO-IM Casetool, 32 bit
        Supported by HAN and FCO-IM Consultancy
        BCP Software

2002   Infagon
        Successor of FCO-IM Casetool, 32 bit
        Mattic

6   FCO-IM courses

During the years of development FCO-IM was educated at the HAN
university and many other educational institutes. However the
mainstream education causing research in this area, is at the HAN.

1994+ Bachelors-level FCO-IM courses
      HAN University

1995+ Post-bachelors program MSc in Information Systems
      development
      HAN University

1995+ FCO-IM course materials and case studies
      KUN University and other universities

1998+ Course 'Hands on FCO-IM'
      HAN Business and Competence Centre,
      Atos Origin BMS Academy

2002+ Course 'Advanced Modeling'
      HAN Business and Competence Centre,
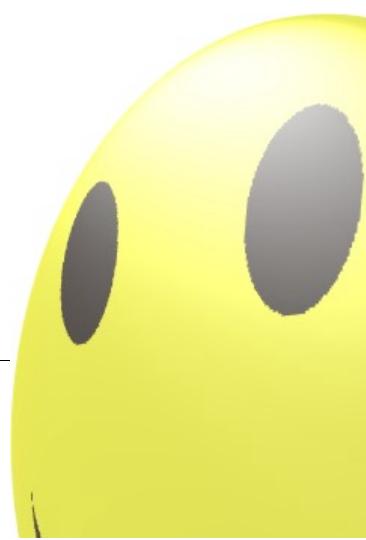   Atos Origin BMS Academy

7   FCO-IM Large Projects

A few large and succesfull projects are done by HAN and Atos
Origin related employees. Many others exist but are not yet named
in this list.

1990   NS (Dutch Railways)
       VPT Model
       Harm van der Lek
       Ended in 1993

1993   CVI
       Peter Alons
       Ended in 1995

1994   Several graduation project
       HAN students
       HAN University uso Guido Bakema, Jan Pieter Zwart,
       Marco Engelbart, Deny Smeets

1996   Railned
       Dons model
       Micha Nabben, Mark Achten
       HAN graduation project uso Guido Bakema, Peter Alons

1998   KLM
       Passage model
       Karel Duran, Peter Alons
       Ongoing project

2000   Sandia National Labs
       Datawarehouse models
       Gary Rivord
       Ongoing projects

2000   HAN University
       FIS2000 model
       Claudine van den Aardweg
       Ongoing project

2000   ING Group
       HRM Datawarehouse
       Jan Kruijdenberg
       Ended in 2003

2002   Railned
        Dons model (new)
        Peter Alons
        Ongoing project

8   FCO-IM Conversion

The content rich FCO-IM repository allows conversion to other
methodologies since they are usually poorer in information
content. Off course in these cases the cost of loosing information
is defendable. Conversion for ER, OO-related methods or
Datawarehouse implementations are possible.

8.1 Meta Data Framework

The Meta Data Framework is the basis for transforming the FCO-IM
repository into other methodology repositories or models.

```
2000   Single Point of Definition Meta Data
       Peter Alons
       Dutch magazine article (2 parts)
       Published in DB/M

2002   DWH life cycle toolsupport
       Elton Manoku
       HAN University graduation project at KLM
       uso Karel Duran
```
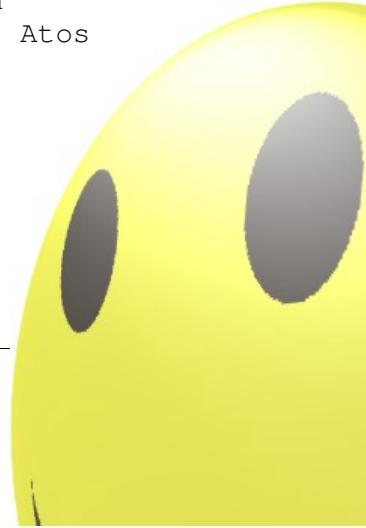
8.2 Entity Relationship Model

```
1998   FCO-IM and ERM
       Guido Bakema, Jan Pieter Zwart
       Paper with heuristic algorithm
       For HAN University, in Dutch and English
       Finalized in 2001

2000   FCO-IM to DWH Converter
       Benon Paloka
       Prototype + documentation
       HAN University student assistant uso Guido Bakema

2000   FCO-IM to ERwin Converter
       InfoShkodra
       Tool
       For Atos Origin uso Guido Bakema + Peter Alons

2001   Genci Berati, Jetmir Karini: tool 'FCO-IM to ERM
       Converter' (HAN University graduation project at Atos
       Origin uso Guido Bakema + Rob Arntz)
```

```
2002   FCO-IM to ERM Converter
       Elton Manoku
       Tool + documentation
       HAN University student assistant uso Guido Bakema,
       Claudine van den Aardweg
```

8.3 Object Orientation Conversions

```
1997   C++ generator
       Ascaris Software
       FCO-IM Casetool version 4.1 plug-in
```

```
2001   FCO-IM to C++ Converter
       Chiel Boon
       Prototype + documentation
       OU University graduation project uso Guido Bakema
```

```
2001   Objectgeoriënteerde Domeinanalyse
       Frank Peters, Frens Vonken
       Dutch book
       Academic Service
```
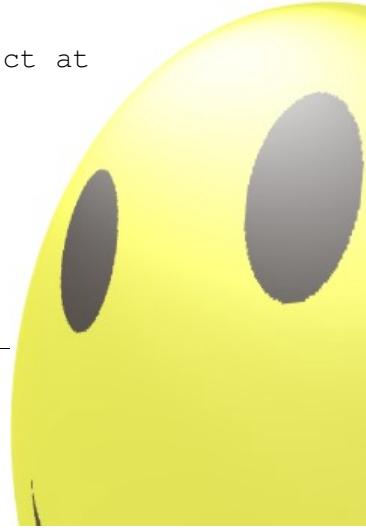
```
2002   FCO-IM to UML Converter
       Elton Manoku
       Tool + documentation
       HAN University student assistant uso Guido Bakema
```

8.4 Datawarehouse conversion

```
1999   Overdekkende Bos Stelling
       Harm van der Lek
       Dutch article
       Published in DB/M
```

```
1999   FCO-IM Datawarehouse wizard
       Jorg Janssen, Egi Rodriguez
       Global heuristic algorithm + prototype
       HAN University graduation project at Summa EST uso
       Guido Bakema
```

```
2000   Detailed heuristic algorithm
       Rob Arntz
       HAN University / KUN University graduation project at
       Atos Origin uso Guido Bakema, Peter Alons
```

2001   StarBridge
       Titus Nachbauer, Norbert de Jonge
       Partial implementated tool
       HAN University graduation project at Atos Origin uso
       Guido Bakema, Rob Arntz

2002   StarBridge
       Elton Manoku
       FCO-IM to Dimensional tool + documentation
       HAN University graduation project at KLM uso Guido
       Bakema, Karel Duran, Rob Arntz

8.5 Generic Repository transformations

2002   New transformation architecture
       Elton Manoku
       HAN University graduation project at KLM

9 Business Rules Automation, Application Generation

Theory development

1991 Idea's with respect to repository extension and
      application generation based on negative and positive
      selects
      Guido Bakema
      Not published

1994 Handle business rules related to FCO-IM
      Han Schouten
      Papers NIAM-ISDM conference

Implementation

1996 Application generator
      Ascaris
      FCO-IM Casetool version 4.1 Plug-in

1997 Constraint storage based on negative selects
      Intermediate tool
      HAN graduation project at Railned uso Guido Bakema,
      Harm van der Lek