
About Facts and Things

FOM in practice

**A compilation of articles published in
Database Magazine in the period 2000-2010.**

Peter Alons

First edition 2013

About Facts and Things

FOM in practice

A compilation of articles published in Database Magazine
in the period 2000-2010, with postscripts of the author.

Dr. P.W.F (Peter) Alons

With special thanks to:

Rob Arntz, co-author of chapters 5 and 7.

First edition 2013

Originally published by

Array Publications b.v.

Original title: Over Feiten en Dingen

Editors

Peter Alons (Director PAICon)

Rob Arntz (Senior Consultant Atos)

Cover design and layout

VerheulCommunicatie.com, Alphen aan den Rijn

Printed by

Brave New Books, Amsterdam

Although this book has been composed with the greatest of care, the authors nor the publisher assume any responsibility for the consequences of any error or deficiency in this book.

© Copyright 2013

Nothing of this book may be multiplied and/or made public by means of print, photocopy, microfilm, audiotape and electronic medium or whatever other way, nor may it be stored in a retrieval system without prior permission of the publisher.

Content

Foreword 5

Introduction 7

1. Single Point of Definition Metadata (1) 11

2. Single Point of Definition Metadata (2) 25

3. About things and facts 35

4. Data quality or Information quality..... 43

5. Information quality? Talking about it helps 51

6. The Information Management Frame in Action..... 61

7. Semantic modeling and generic structures 75

Epilogue..... 95

Foreword

“There is a person Peter Alons”. That is the first fact in this compilation of articles written by Peter Alons. These articles were published in the first ten years of this century in Database Magazine.

Already in his first article ‘Single Point of Definition Metadata’ Peter describes the importance of an information model truly validated by the end users (information consumers). This true validation is not only at the core of the Information Management Frame, it is also the basis for the great passion with which Peter has developed and applied the Information Management Frame over the years.

If we go in review over the past ten years, Peter’s enthusiasm remains visible. But then, it does not surprise many that Peter is greatly charmed by a communication oriented method ... if anyone likes to communicate, it is Peter!

I got acquainted with Peter ten years ago because of my final project. In those days Peter and I developed under supervision of Guido Bakema and in collaboration with Harm van der Lek an ‘arrow’ in the Information Management Frame: the algorithmic transformation of an FCO-IM model into a Star model. Thus, it became a period in which Peter, Harm and Guido introduced me into a truly interesting development that I have continued to pursue after my final project as colleague of Peter.

Once the Information Management Frame was set up, it has been applied at a number of customers, in particular KLM, Rabobank and Generali. The use of it at the Erasmus Medical Center has been quite extraordinary. Not only because the frame has been applied in full detail, but in particular due to the recognition it received from the end users and even from the outside world by winning the Computable Award 2007 for the best IT-project in Health Care. Maybe for the approach of the frame we should replace the time-honored adagio “Actions speak louder than words” by “Actions speak louder thanks to words”.

Gradually through the years Peter specialized besides on information modeling more and more on the field of information quality. For many these are two totally different aspects, but for Peter it is a logical combination. See also the chapter ‘Information quality? Talking about it helps’.

With the development of the Information Management Frame a standard way of working has emerged within Atos for the modeling of Business Intelligence applications. Meanwhile, this has been firmly embedded in the Atos BI-Navigator. Currently, the approach for information quality preferred by Peter is being integrated in this standard way of working as well.

With the publishing of this book the moment has come as well that Peter is retiring and is officially leaving Atos after more than twenty years. In 'my' Competence team I shall miss him. I am convinced though, that the world of Business Intelligence will not have to do without Peters drive for the coming years. I will definitely still see him within Atos in his favorite role: as course instructor.

Peter still has plenty of ideas in his head ... and will surely work them out in the near future. Peter, shall we make an appointment to write a sequel to this book in say ten years from now?

Amersfoort, October 2010,

Rob Arntz

Introduction

I was born by nature as typical 'beta'. My preference for figures and calculus was greater than for language. This made me start studying Physics, which culminated in my PhD at the 'Vrije Universiteit' in Amsterdam on a topic from Nuclear Physics. My rambling feet took me to the United States of America, where via the universities in Colorado and Indiana, I ended up at the 'Los Alamos Meson Physics Facility', an environment rich in history (starting off with the local Indians). From this period of my life you can still find on the internet a number of rather obscure articles from my hand. Does a human being have several lives too? For me it feels that way. After this period I went back to the Netherlands and threw myself into the world of IT, where I joined BSO, nowadays Atos. In those days you still got a handshake from the CEO himself, Eckart Wintzen. When I asked him how I could join his company with my background, he answered: "Simple, helicopter view! That is typical of physicists".

Ever since then I tried live up to that principle, although I thought that my passion for modeling the real world had something to do with it too. I started to work with my acquired knowledge of data modeling, such as ERM and 'Bubbles', and after a while I met Harm van der Lek, at the time a colleague of mine. He put me in touch with NIAM, and I was immediately convinced in particular by his version, the current FCO-IM. I learned that in my present work I did not have to model reality itself, but 'only' the *communication* about reality. At that time Harm was treated somewhat discourteously in a local magazine because of his view and that annoyed me, also because in my view the argumentation of the writer against NIAM was obviously wrong. As a result, I already developed the third chapter of this book, "About Things and Facts", almost entirely in my head at that time. I then did not know an appropriate medium for placement of it and it is thanks to Hans Lamboo, that it was yet published ten years later in DB/M. Hans asked me if I did not have a sequel to my first articles about the Information Management Frame and I told him about this idea, but expressed serious doubt whether it was appropriate for DB/M. When Hans had read it, he reported back to me: "You are right, this has definitely no place in DB/M, but I am going to publish it all the same".

All articles compiled in this book are the result of thoughts based on two quotes from the literature. The first one is by Ludwig Wittgenstein from

1923, also reproduced in the chapter “About Things and Facts”. The second one I found in 2002 on the internet by Gartner.

Quote Ludwig Wittgenstein 1923: *“The world is all that is the case. The world is the totality of facts, not of things. The world is determined by the facts, and by their being all the facts. For the totality of facts determines what is the case, and also whatever is not the case. The facts in the logical space are the world. The world divides into facts.”...*

...“Of what we cannot speak, we must pass over in silence.”

Quote Gartner 2002: *“In spite of all modern vendor products, it is always necessary to obtain a clear-cut model – validated by the end users – of what the end users want to see in their BI-applications. Only from such a perspective one can look for an effective implementation of all necessary data-elements in the finally chosen technical environment for these BI-applications.”*

Why were these quotes so guiding for my thoughts? Well, in a Business Intelligence project usually a - possibly large - number of documents is made available, which describe the desired information and KPI's from the information consumer's point of view. These information consumers are always knowledge workers in the company that are fully accomplished in their own domain, such as physicians in a hospital. Together with the specifications of all the reports that the knowledge workers want to see, these reports constitute the basis for the data model of the desired Business Intelligence environment. The particular form of the delivered documentation is not relevant to our approach. Essential is, that the resulting data model *can be validated in a completely reliable way by the knowledge workers*. Only from that perspective one can search for an effective implementation of all necessary data elements (see the quote of Gartner).

This particular objective - completely reliable validation by the domain experts - is being pursued by the use of the Information Management Frame described in this book. This objective is the *first* unique customer benefit of the method: *by means of active, effective user participation we can produce an unambiguous modeling of the desired Business Intelligence environment validated by the domain experts*.

The *second* customer benefit of the method is *that the completely validated data model can be managed and maintained cost effectively, and can be extended by means of well-focused increments*. By now this power has been proven at various customers that I have worked for as consultant of Atos.

The first two articles of this book I wrote in the period, that I started to develop the thoughts about it from my conversations with Guido Bakema, lector at the 'Hogeschool van Arnhem and Nijmegen' and co-author of the book "Fully Communication Oriented Information Modeling" (FCO-IM). Everything then promised in these articles about tools that would be developed in support of the Information Management Frame has by now truly been developed and made available through the combined efforts of many people. How the third article came about, was described above. The last two articles describe the practice of the Information Management Frame, and have evolved from the work that Rob Arntz and I have performed at several of our customers.

In between you find two articles that are the result of the fact, that I became interested in information quality and in particular the ideas of Larry English on this. In 2007 I was so lucky to break my upper arm by falling down a stairway during my winter sports holiday. Due to this I had ample time to read Larry's book on this subject and to develop a large amount of material in this field. The first article of the two ran - a wee bit charging - counter to the frequent use of the term 'data quality' instead of 'information quality', as if the two are synonymous. This is not the case. Data quality is a component of information quality and draws by itself only attention to the techniques used. Much more important is that the occurrence of poor information quality stems from the actual behavior of people resulting from a lack of feeling for the interests of the customers of the company product information. And when shortly after a stock-broker employee in Japan fired an unfortunate typing error into the Japanese stock exchange, which resulted in the sale of 610.000 shares of the Japanese company J-com for 1 Yen a piece instead of one share for 610,000 Yen, Rob and I lost no time in linking information quality and the use of the Information Management Frame together. For nothing is more powerful as "Poka Yoke" than making the semantic meaning of information visible during the use of that information in end-user applications. And it is also much cheaper than developing all kinds of extra applications for a stock exchange, which should figure out by themselves why some transaction is 'erroneous'.

I hope that reading this book will reveal to you, what power lies beneath the consistent use of the Information Management Frame in your IT-projects. And how this power can contribute to achieve what is highly essential to the well-being of your company: the *right level of quality* of your most important asset in these times: *information*.
