IBM Performance 2011

Smarter Decisions. Better Results.

New Challenges in Predictive Analytics at UPC

Jim Jenkins

9 November 2011

UPC in Europe

- Provider of cable television, internet and telephony services
- Active in 10 European countries under the brands UPC and Unitymedia (Germany)
- $6.3 billion turnover (annualized results for the three months ended June 30, 2011)
- 22.9 million homes passed
- 20.7 million service subscribers (RGUs):
  - 12.6 million video subscribers, of which 5.8 million are digital cable and DTH subscribers
  - 4.7 million broadband internet subscribers
  - 3.4 million telephony subscribers
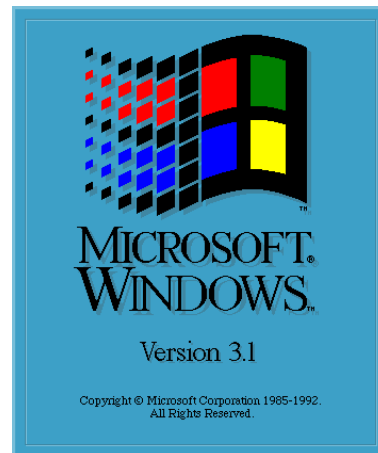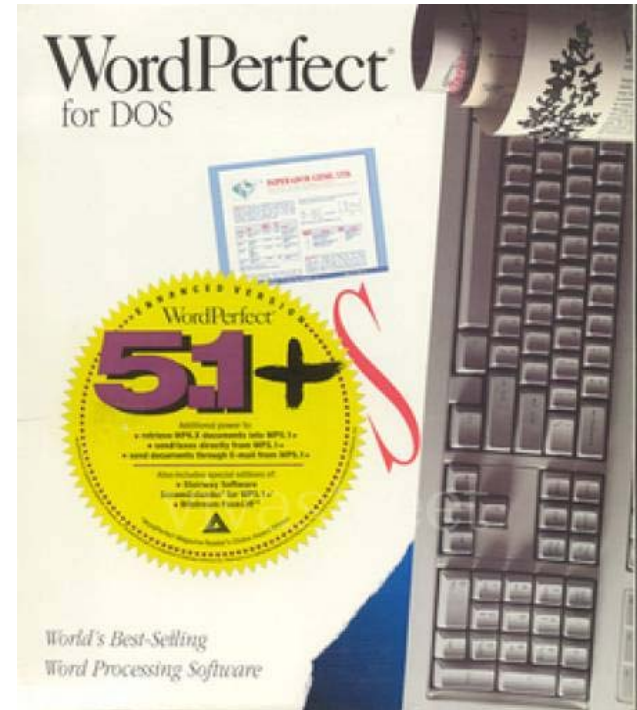
What's This All About

- Journey in predictive analytics
- From first steps
  - Single models
  - Data development
  - Plenty of time
  - Test campaigns
  - Proof of concept
- To mass production
  - Multiple models
  - Automated data preparation
  - Next day delivery
 - Instant implementation

How Did We Get Here?

History of Software

Predicting the Past

- Imputation in business surveys

- Revisions of official statistics

- National Minimum Wage - predictive mean matching

  Skinner, C., Stuttard, N., Beissel-Durrant, G. and Jenkins, J. (2002), The Measurement of Low Pay in the UK Labour Force Survey. Oxford Bulletin of Economics and Statistics, 64: 653–676.

- Linear regression using SPSS for Windows

SPSS for Windows
Base System User's Guide
Release 6.0

Marija J. Norusis/SPSS Inc.
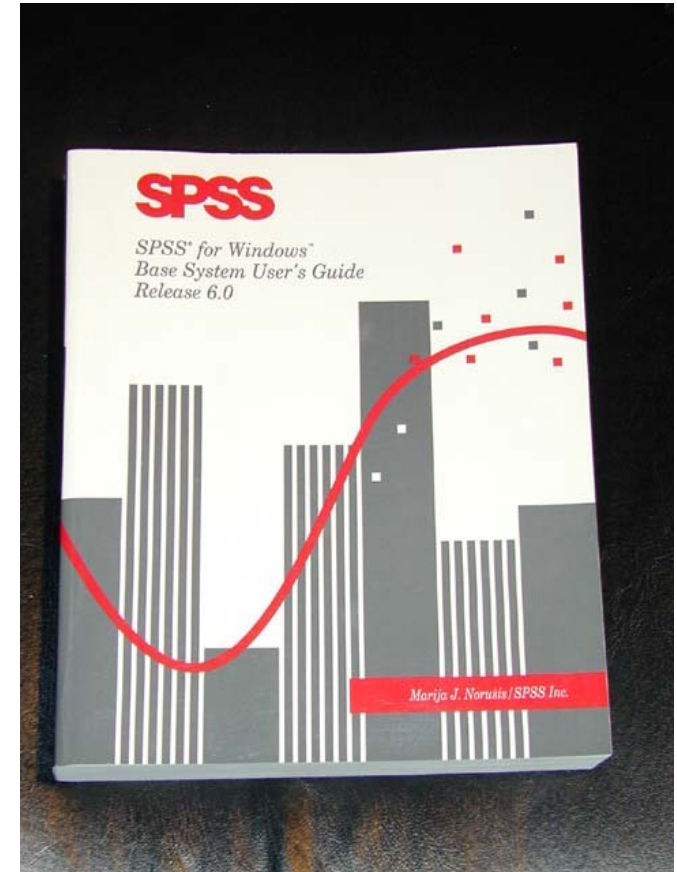
CRM and Predictive Analytics

What is Customer Relationship Management?

Kotler: "CRM is the process of carefully managing detailed information about individual customers and all customer touchpoints to maximize customer loyalty."

How did we do that in practice – challenges:

- Access to data
- Integration with SPSS
- Processing millions of records
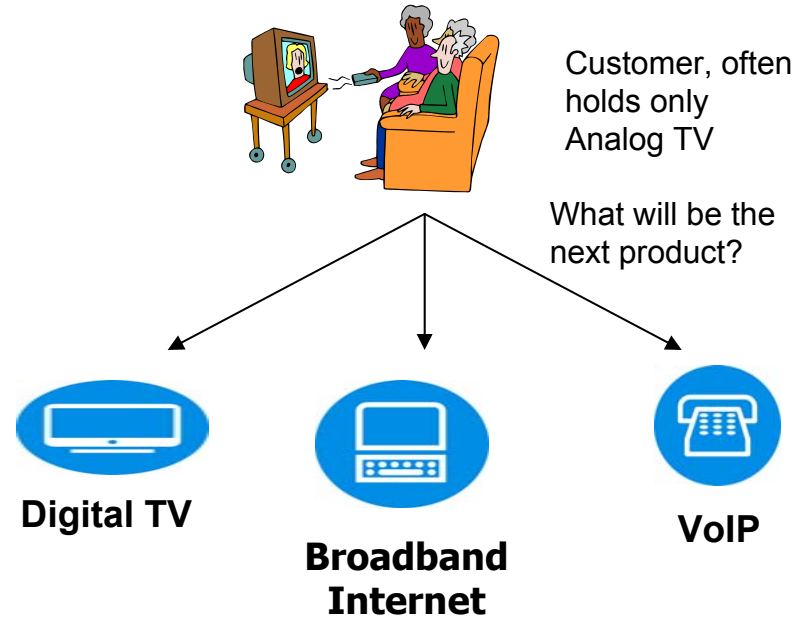- Automate with syntax
- Implementation

7
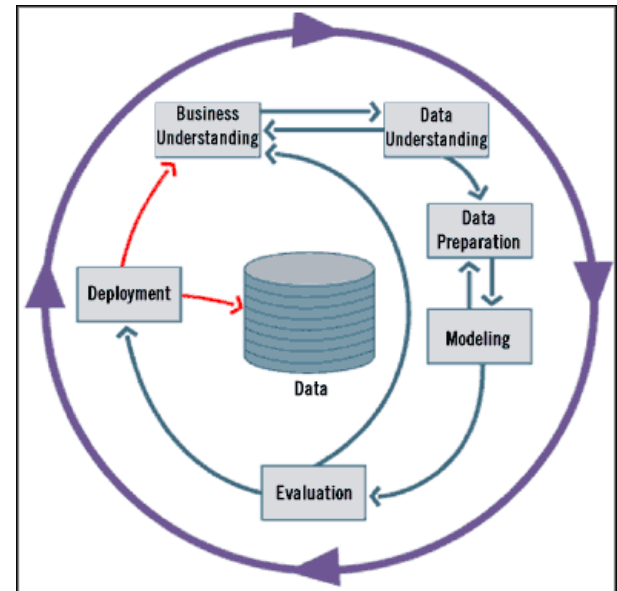
Getting Serious about Predictive Analytics
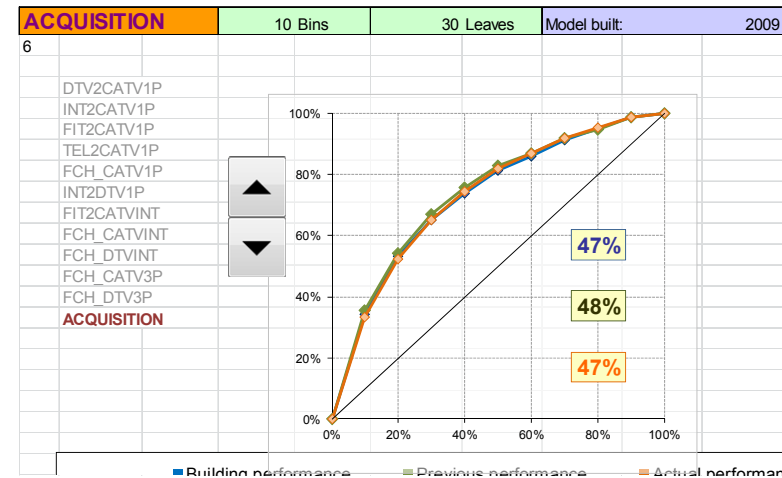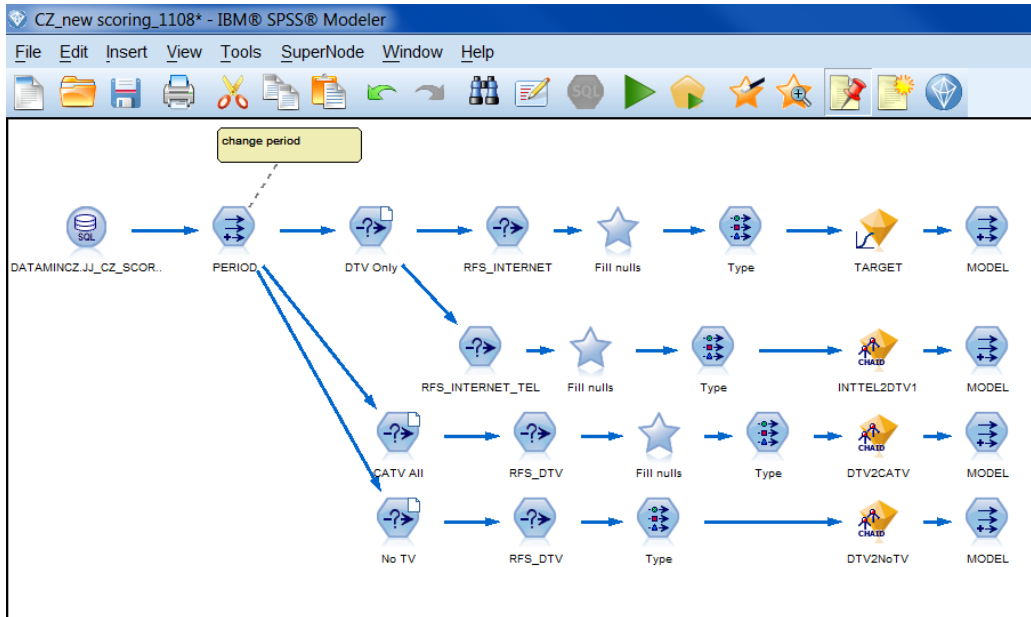
Next Best Offer

- What is it?
  - In a sales situation, offer the customer the product or bundle which he/she has the greatest likelihood of purchasing, or
  - offer the product or bundle which, on average, will deliver the greatest return.

- What is the benefit?
  - Guaranteed more sales/revenue from the same level of contact, or
  - Reduced cost to achieve the same sales/revenue

- What do you need?
  - A range of offers (products and bundles)
  - Propensity scores for each offer for each customer
  - Campaign management or lead delivery system

Customer, often holds only Analog TV

What will be the next product?

Digital TV

Broadband Internet

VoIP

Predictive analytics can tell you what is the next best product to offer. It is based on statistical evidence and so, on average, always leads to a better outcome.

9

Moving to Large Scale Implementation

- **Inbound recommendation**
  - Moving towards real-time
- **Analytical Data Model**

- **Collaboration and Deployment Services**
  - Scheduling and automation
  - Triple effectiveness of resource
  - 1 model to 100 models
  - Data preparation, scoring, validation
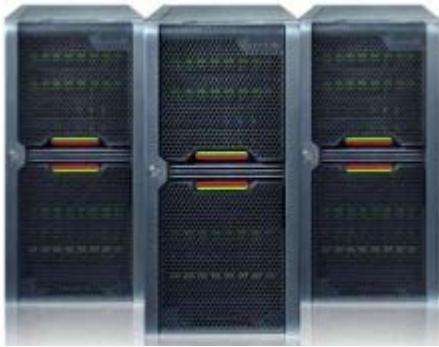- **Integrate with Unica campaign management**
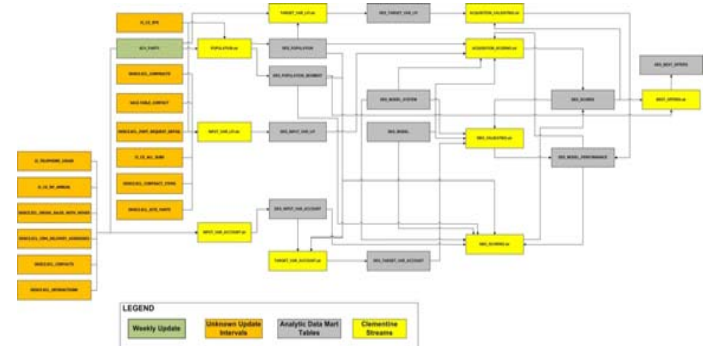
Next Challenges

- Help marketeers understand the benefits of using predictive analytics (again!)

- Take advantage of feedback loop from Unica to develop more response based models and uplift models

- Keep improving automation to move closer to real-time scoring

- Develop new markets
  - (do more work) with the same resource

EUROPE

Some Results

- Churn and sales drivers have been identified through simple data mining and processes changed accordingly

- New country recently started using propensity models to target sales and is achieving 300% improvement

- Churn models have helped improve retention campaigns – target segments had twice churn rate of control

In Conclusion – Our Journey