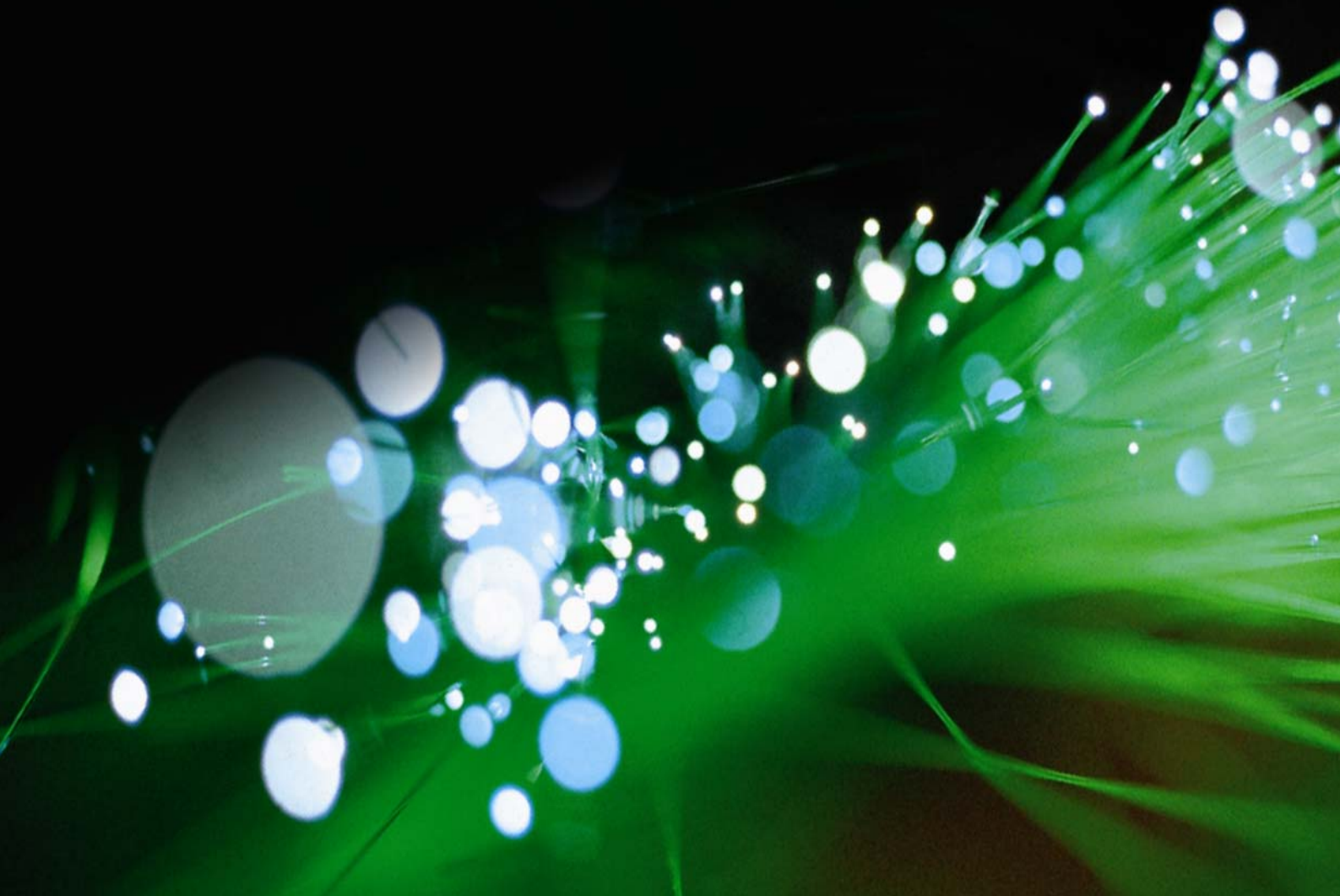




BUREAU VAN DIJK

Tariff Transparency

Online Interactive Tariff Guide



Tariff Transparency - Online Interactive Tariff Guide

Telecommunications operators' tariffs are a puzzling world. Residential consumers find it a daunting and cumbersome task to **compare** different tariffs schemes, their options and to come up with products/services corresponding to their usage needs and **value for money**.

In acknowledgment of these problems, the **New Regulatory Framework** (NRF) addressed the issue of transparency and publication of information in article 21 of the **Universal Service Directive**, stating that:

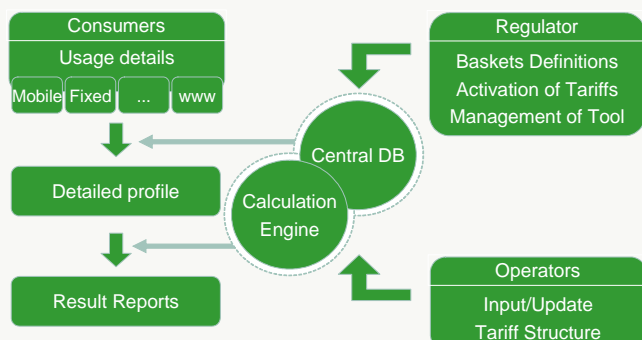
"National regulatory authorities shall encourage the provision of information to enable end-users, as far as appropriate, and consumers to make an independent evaluation of the cost of alternative usage patterns, by means of, for instance, interactive guides".

The NRF hereby suggests the use of **tools** to inform consumers, counteracting the proliferating confusion which undermines competitive forces. In order to assist the NRAs BvDMC has developed the **interactive tariff guide process**, helping bewildered consumers see through the tariff structures and presenting them with **tailor-made reports**.

KEY FEATURES

The **Online Interactive Tariff Guide (OITG)** workflow, as depicted in the figure below, is designed around a **consumer's** perspective, demanding **ease-of-use** and **accuracy**. Although these are often conflicting needs, BvDMC has the **market knowledge** and detailed **profile modelling** capacity to guarantee a very high degree of accuracy, while maintaining user-friendliness.

From an **operator's** point of view, the OITG allows for the most comprehensive, fully **parameterized** tariff definitions to ensure the OITG is **future proof**, e.g. envisioned for tomorrow's service bundling offers such as triple play.



OITG: Process Workflow

The OITG workflow furthermore gives the **regulator** complete **control** during the whole process, thereby acknowledging his final **responsibility**.

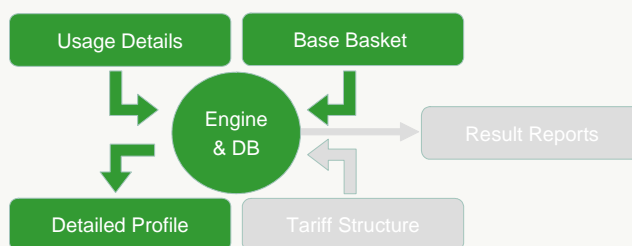
PROCESS

The high-level process can be divided in two separate steps, which are elaborated hereunder together with their pitfalls and inherent trade-offs.

STEP 1 BUILDING THE DETAILED PROFILE

Step 1 encompasses following tasks:

- Gathering **Usage Details**
- Building a **Detailed Profile** based on the usage details and **Base Baskets**



Step 1: Calculation of detailed consumer profile

Base Baskets are to be defined by the regulator. They represent the **user/usage profile segmentation**, and are therefore best characterized in collaborating with the operators based on **specific market** usage data. BvDMC can assist the regulator in analysing specific markets and defining Base Baskets, all in cooperation with the operators.

For reasons of accuracy, BvDMC has defined **Extended Base Baskets** based on e.g. duration probability density functions, which allow to accurately calculate second order effects, such as the impact of non-real time charging and minimum time duration. The figure below represents a simplified Extended Base Basket.

Time of Day	Destination			
	National	Operator 1	Operator 2	Other
Peak	13 mins	5,1 mins	3 mins	0,4 min
Off-peak	23 mins	8 mins	4,3 mins	0,3 min
Weekend	15 mins	6 mins	4,2 mins	0,2 min

Average duration	128 s	115 s	103 s	99 s
Standard Deviation	132 s	125 s	115 s	89 s
% Calls < 1 min	66 %	80 %	76%	80%

Extended Base Basket with probability parameters (simplified)

BvD has established a **process** of identifying Extended Base Baskets and this process must be concluded before the OITG implementation.

- Identifying possible user and usage clustering
- Associating duration probability distributions per cluster, and per destination *and/or* time-of-day couple
- Defining all Extended Base Basket data

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Usage details are entered by the consumer and can be of different types:

- Nominal, e.g. "Profession: student"
- Scale/Ordinal, calling circle: "I call my friends a lot"
- Interval, e.g. "I call 234 minutes per month"

The most important aspect is that almost all consumers must at least be able to **approximate** the answer to these questions in a relative short timeframe.

The Base Baskets are closely related to the definition of the necessary usage details, as usage details define the cluster or set of Base Baskets to which the user belongs and the exact position in this set.

Building a Detailed Profile After associating the consumer with a certain cluster, or set of base baskets, the **detailed profile** of this specific user is established by complex **interpolations** using the ordinal and interval variables in the usage details. BvDMC has established interpolation equations for various cases, as these are dependent on the market clustering, and probability distributions.

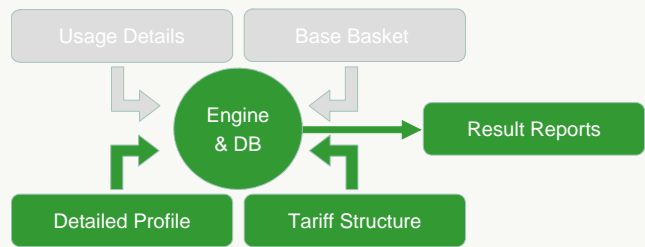
In the final stage of step 1, the detailed consumer profile is presented to the user, after which it can be further personalised to better reflect his/her actual profile.

STEP 2 CALCULATION & EVALUATION

Step 2 encompasses following tasks:

- **Calculating** the monthly bill for each Tariff/Option
- Combining Quantitative & Qualitative aspects in the final Report

Calculating the monthly bill requires **accurate** calculations combining detailed consumer profile information with tariff and option structure information. These calculations accurately account for the **second order effects** caused by specific consumer usage patterns reflected in the Extended Base Baskets. BvDMC has generalised these complex equations based on extended base basket templates and the defined probability density functions.



Step 2: Calculation of individualised result report

Combining Quantitative & Qualitative aspects in the final report Since users' usage needs encompass quantitative and **qualitative aspects**, e.g. service level, the OITG final report allows users to evaluate tariff schemes integrating both dimensions.

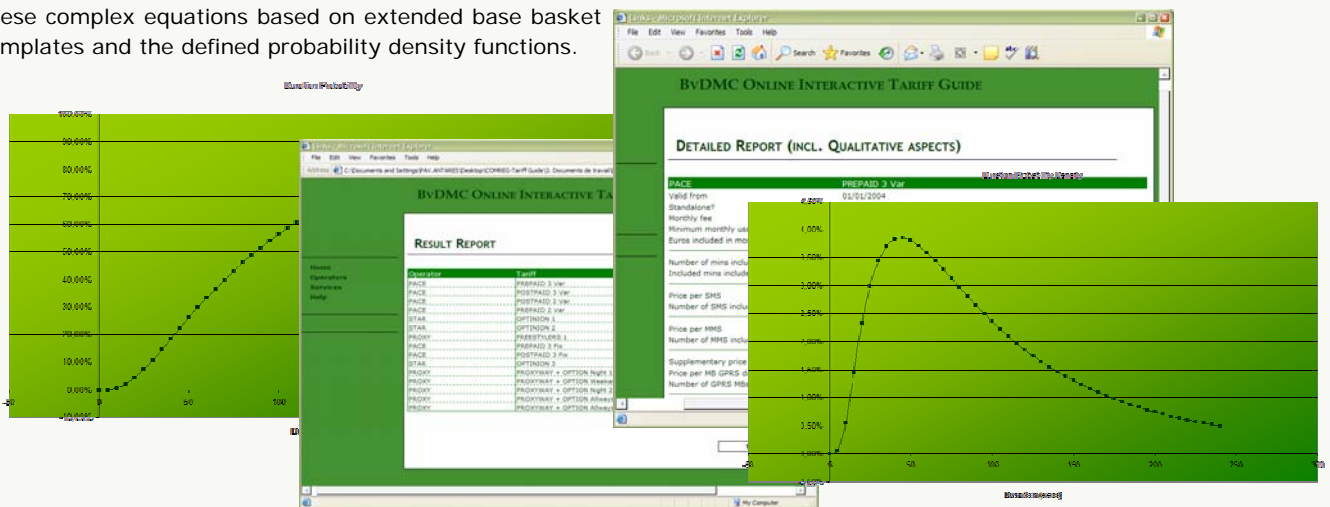
Furthermore, the OITG allows for the integration of exceptional and short-term **promotions** in the qualitative aspects of the report, this in order not to obfuscate long-term base comparisons between different tariff schemes.

In the final stage the detailed online report, encompassing both quantitative and qualitative aspects, is presented to the user.

BvDMC TAILOR-MADE SERVICES

Renowned for our **client-focus**, we take pride to assist you through all possible stages from **conceptualisation** to **final product** with tailor-made services, from **advice** and **workshops** to complete **implementation**.

Furthermore, the BvDMC tariff guide will require more **high-level decisions** to be made on issues such as e.g. fixed cost depreciation, handset subsidies. Throughout the years BvDMC has build up an **extensive experience** in reconciling general best practices with the specific needs of our clients, given the specific economical political and regulatory environment.



Active since the early stage of the liberalisation of the telecommunications sector in Western Europe, Bureau van Dijk Management has acquired an extensive expertise in a broad range of issues related to the regulation of this sector.

Throughout the years, we have build a clientele amongst governmental institutions, as well as privately owned businesses around the world, with which we are renowned for our pragmatic approach in close collaboration with the client and our focus on the transfer of know-how. We have advised on a whole spectrum of regulatory and competition issues facing the telecommunications industry and regulatory policy makers, constantly focussing on new or expected evolutions.

The telecommunications landscape is continuing to undergo profound changes. The growing tendency towards liberalisation and privatisation, together with the emergence of new services brings along new markets, demanding new insights, new partners and new strategies.

Bureau van Dijk Management Consultants works side-by-side with their clients, to guide and support them with detailed analyses, clear insights, sector expertise and invaluable software tools. Because our long-term focus on the telecommunications industry, our consultants have the direct hands-on experience and the expertise to deliver excellence, every time, in time.



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