



# **Building the Bitstream Offer**

Cost Modelling Solutions for Broadband Services



# Bitstream Access - Building the Regulatory Offer

Nowadays, the broadband access market competition is subject to dramatic changes, due not only to the evolution of the technology but also to the progression of regulatory efforts.

Bitstream access will more than likely experience a strong regulation as it is explicitly favoured by the **New Regulatory Framework** (NRF). The NRF overcomes the former ONP framework ambiguity on bitstream access regulation, as it explicitly foresees ex-ante regulation, including remedies like transparency, non-discrimination, mandatory access, price control and cost accounting obligations, etc.

Moreover, the **pressure on the NRAs** to act is growing, as the remaining window of opportunity to steer the telecom sector towards sustainable competition is getting smaller.

## REMEDIES FOR BROADBAND SERVICES

The EC requested Professor Martin Cave to deeply study the remedies for broadband services. This study introduced some new concepts like 'replicability' and the 'ladder of investment' <sup>(1)</sup>.

They are likely to become standard concepts as can be seen from the impact of the study on the ERG Common Position on Bitstream Access and on the Draft ERG Opinion 'Guidelines on implementing accounting separation and cost accounting':

*'In order for the "ladder model" to work, i.e. to allow the "climbing of the ladder of infrastructure competition" it is crucial that the prices of the different access products are consistently regulated (if price-control measures are in place), ...'*<sup>(2)</sup>

*'In situations where replicability of infrastructure is deemed economically infeasible, the use of existing facilities of the regulated operator should be encouraged. This could be achieved by setting prices for (access) services close or equal to the efficient costs of providing the service'*<sup>(3)</sup>.

As a result operators can expect regulatory action, based on the concepts introduced by Cave, which should lead them to acquire a detailed understanding of the concept 'ladder of investment' and its implications in order to align their strategy with the New Regulatory Framework.

- (1) Study of Professor Martin Cave on 'Remedies for Broadband Services' published on the site of the EC in November 2003.
- (2) Bitstream Access, ERG Common Position – Adopted on 2nd April 2004.
- (3) 'Annex: Guidelines on implementing accounting separation and cost accounting' from 'Consultation on a draft Opinion on the European Commission's Recommendation on Accounting separation and cost accounting' of June 11th 2004.

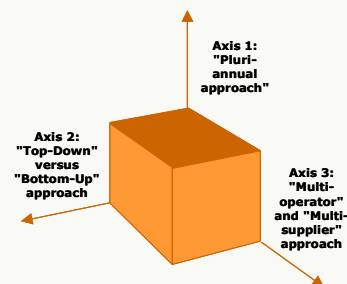
## VDMC COST MODELLING SOLUTION FOR BITSTREAM SERVICES

The modular structure of VDMC Cost Modelling Solution for Bitstream Access provides an excellent overview of the costs incurred along the value chain of all network parts, needed to provide unbundled Bitstream Access Services:

<b>Module 0</b>	Input parameters
<b>Module 1</b>	From user to DSLAM
<b>Module 2</b>	DSLAM equipment
<b>Module 3</b>	From DSLAM to ATM network
<b>Module 4</b>	ATM network
<b>Module 5</b>	Competitiveness analysis

Moreover, the unique combination of this modular approach and a modelling flexibility defined around three axes, turns the VDMC Cost Modelling Solutions into a very powerful tool for speeding up significantly the understanding and justification of the Bitstream Access Services cost structure.

### Modelling Flexibility



#### Axis 1: The business plan

In view of the expected growth in broadband demand, IP and ATM networks are typically dimensioned for future, not current output levels. The appropriate response is to estimate costs on the basis of a business plan, which takes account of growth and future prospects.

The VDMC Cost Modelling Solution for Bitstream Access incorporates the idea of a business plan approach in the core of its implementation. As such the model can carry out a life cycle assessment of costs.

#### Axis 2: Top-Down versus Bottom-Up

The determination of costs can in general take two routes: bottom-up and top-down.

The model can use the Bottom-up approach and a hybrid Top-down approach. The latter makes use of the actual installed inventory instead of the required equipment, as

# Bitstream Access - Solving Regulatory Costing Issues

calculated by means of Bottom-up dimensioning algorithms.

Furthermore, the VDMC Cost Modelling Solution for Bitstream Access can easily be adapted to estimate the specific type of cost which is most relevant to the task at hand: total costs, (long-run) incremental costs and stand-alone costs.

## Axis 3: Multi-supplier and Multi-operator

VDMC Cost Modelling Solution for Bitstream Access allows the modelling of equipment of multiple suppliers and hence different technical characteristics.

Also, a scenario can be developed, based on the selection of the 'most efficient' equipment (MEA or Modern Equivalent Asset) deployed by an efficient operator.

Finally, the replicability of each part of the network can be checked as the model calculates and compares the costs of the incumbent and of the OLO.

## Regulatory and Internal Applications

The model has already been used to satisfy the specific needs of both European operators and regulators, in order to e.g.:

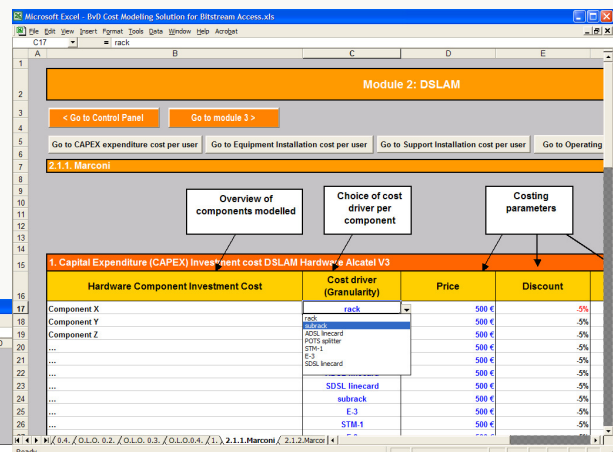
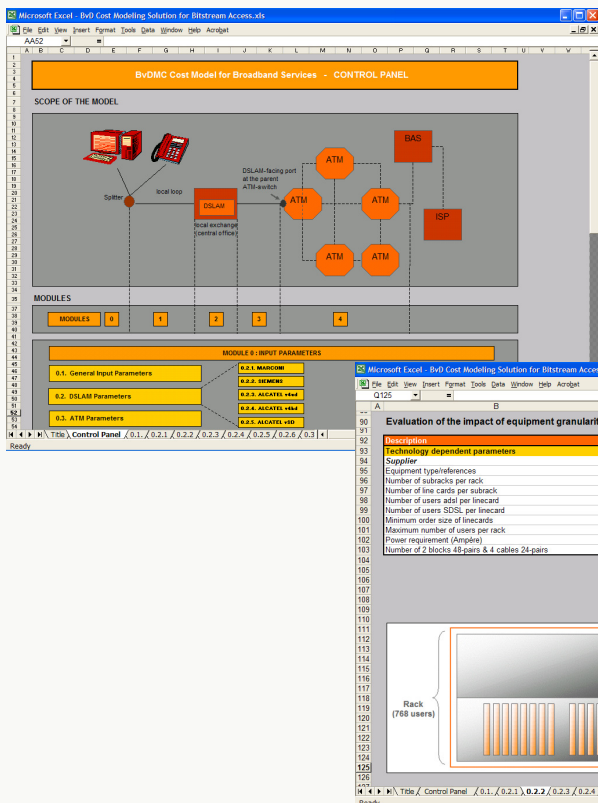
- ◆ Ensure a **consistent price structure** of all regulated access products;

- ◆ Check the potential for **replicability** in the different parts of the network;
- ◆ Identify and assess cost-related **barriers to entry**;
- ◆ Determine the point in the network at which the wholesale broadband access market will need to be supplied;
- ◆ Test for **price squeeze** between the several bitstream offers and the incumbent's retail offer;
- ◆ Check the impact of **diffusion** on costs;
- ◆ Calculate reasonable **capacity utilization**;
- ◆ Evaluate the cost of a **Universal Service** Obligation for broadband;
- ◆ Determine (minimum) **efficient scale**;
- ◆ Evaluate economies of **scale, scope** and **density**;
- ◆ Perform a **competitiveness analysis**.

## VDMC'S TAILOR MADE SERVICES

The impact of the choices made regarding the cost modelling approaches will be very significant. Therefore, VDMC assists their clients in making the right choices, given the specific economic, political and regulatory environment.

Furthermore, the chosen cost modelling approach will require further decisions on their detailed implementation. Issues such as e.g. the valuation of the assets, the choice of depreciation methodology and the introduction of the granularity of equipment have been dealt with by VDMC who have build up an extensive experience in reconciling general best-practice guidelines with the specific needs of their clients.



*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.*



VAN DIJK  
MANAGEMENT CONSULTANTS

**Tine Debusschere**  
Director

250, av. Louise - bte 14 - B-1050 Brussels (Belgium)  
Tel. +32 2 641 00 00 - Fax : +32 2 641 00 30  
e-mail: tdb@bvdmc.com



VAN DIJK  
MANAGEMENT CONSULTANTS

**Leen Moria**  
Consultant

250, av. Louise - bte 14 - B-1050 Brussels (Belgium)  
Tel. +32 2 641 00 00 - Fax : +32 2 641 00 30  
e-mail: lmo@bvdmc.com

*The companies Bureau van Dijk Management Consultants in Brussels and Paris are at the origin of the Group Bureau van Dijk Electronic Publishing that consists of 17 companies established in Europe, the United States and Japan. Their collaboration has remained privileged by the main shareholder of the Bureau van Dijk Management Consultants companies.*



**VAN DIJK**  
MANAGEMENT CONSULTANTS