



## Introduction

### On Gathering Cost Driver Information from the IP Network for Service Costing

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Calculation of service costs should be a standard task for a network operator. Moreover, a frequent reporting of service costs provides the basis for managing the company. Where services, as opposed to physical products, are provided, the related costing models require cost driver information that is derived from the individual network assets. Therefore the analysis of network usage is one of the pivotal points of cost accounting in telecoms. Utilization figures, e.g. voice minutes, or bandwidths, are deemed as reasonable cost drivers for splitting network costs amongst services.

The migration to Next Generation Networks (NGN) has made this task more challenging as a single network is used to provide a number of services with quite different characteristics. As a result, relatively few costs are directly attributable to a specific service. The majority of costs remain common to all services and require appropriate indirect allocation principles. Additionally, as an NGN requires significant investments, the amount of common cost can easily reach millions of Euros per year – even for small and medium size operators.

That should be sufficient justification to seek a method of calculating a precise split of the joint and common costs of the IP network elements in order to identify the proportion of the costs used by each service. For operators with significant market power this task is additionally exposed to regulatory scrutiny.

While NGNs were in the launch phase, the focus was on ad-hoc calculations (e.g. bottom-up models for regulatory purposes) and forward-looking investment appraisals (business plans). Thus cost drivers had to be based on sample data and best-practice estimates derived from other networks.

As the use of NGNs matures, a transition towards an 'operational cost accounting' becomes more important. Considering the significant NGN asset value in question, cost driver information should be gathered frequently in a precise and deterministic manner. That will allow the calculation of the full cost of IP services and provide support for business planning and current reporting.

The paper 'Deterministic cost drivers for IP cost models' describes a new approach combining continuous measurement with a traffic-charging algorithm. The technical basis for this is the enabling of traffic accounting in the IP network. The algorithm presented in the paper is the key element in the conversion of a huge number of data records into few percentages for the cost model.

It can be demonstrated that such an approach represents a significant qualitative improvement in several ways:

- Traffic information available for calculations becomes very detailed and comprehensive
- Monthly calculations and reporting are supported
- Determinism of cost allocation is ensured
- Forecasts can be based on accurate historical data

Finally the project showed that today's Business Intelligence tools are sophisticated enough for implementing a deterministic approach for gathering costing information. What is standard for data collection in legacy networks should become standard for IP networks as well. To reach that goal some dedicated investment is unavoidable. The return is in a deterministic service costing.

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