FlexiTon

The Missing Step in Transport Network Planning

InterComms talks to Mr. Károly Kara, Project Services Director of FlexiTon

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Károly is Project Services Director at FlexiTon whose mission is to significantly enhance the network management efficiency of telecom operators and provide them turnkey modular solutions. He leads the project department in the company where his primary responsibility is to help define the company's product portfolio and strategy. He started in the telecommunnication industry in 1998 and holds a B.S. in telecommunication engineering from the Óbuda University in Budapest, Hungary.

Q: Could you explain how you see network planning and planning in the network life-cycle, and where CSPs are falling down in this area?
A: Communication service providers have continuous traffic

and transport challenges. One key challenge is how to link long term strategy to day-to-day engineering reality in this environment.

There is nothing new in saying that the pace of change in any communications network is increasing. However there are still a number of key questions:

• Do we have a good answer to the question how to link the long-term business and technology strategy to short-

►

Medium Term Planning

Analyse network

Confirm modification

Design changes

Manage rollout

Performance-aware decision making

Optimise network

ariadne
product family

►   term planning and engineering reality?
- How to get meaningful planning results when a lot of data is missing or unreliable and on top of that there are many uncertainties in the demand predictions?
- "Time to market", as one of the key requirements to be successful, is very well known. Do we really exploit all of our potential to respond to the fast changing demands?
- For a long time over-dimensioning has been the only means to ensure the capability to fulfil new demands very fast. Is over-dimensioning of the transmission/transport networks sustainable? Will these networks be technology and cost optimised in order to be more effective?

Whenever these questions and concerns need to be addressed then the ARIADNE/NetAnalyst (medium term planning tool) is able to help to find the right answers, irrespective of the technologies used or equipment vendors involved.

Q: Can we discuss how ARIADNE/NetAnalyst can help to overcome these difficulties and to develop transport network planning?

A: ARIADNE/NetAnalyst supports the planning cycle:
- Model creation: loading of existing network data, traffic data, building of modelled network specific data, setting of traffic, fill-rate and capacity parameters
- Running and evaluation of analysis cycles, reporting
- Saving and exporting of any network status

with potential loopbacks during the phases, which is required in most networks in real life.

The planning process with ARIADNE/NetAnalyst is iterative and supports decision making in each step. It does not aim to replace the creativity of the experienced network planners, on the contrary, ARIADNE/NetAnalyst supports the planning process so that the planners can create the optimal solution.

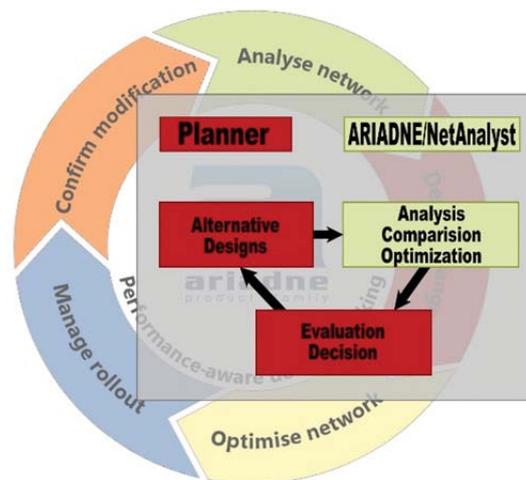In practice the iterative managed processes are:
- ARIADNE/NetAnalyst analyses and compares ⟶ The planner evaluates and makes decisions
- The planner specifies alternative designs ⟶ ARIADNE/NetAnalyst analyses, compares, optimises (within boundaries) ⟶ The planner evaluates and makes decisions.

The iterative nature of these processes significantly reduces the time and effort needed for a medium term planning cycle.

Q: Can network planning be fully automated intelligently?

A: The answer is clearly: No. However, ARIADNE/NetAnalyst can support engineers in focusing their attention on real engineering work by offloading the repetitive tasks and calculations. On top of that, modelling and visualisation of the network are key functionalities that support engineers to find the most innovative, optimal design, irrespective of the planned technologies (SDH, IP, Ethernet, WDM, etc).

The basic principles of effective planning that ARIADNE/

NetAnalyst is built on are as follows:
- Adaptation to the different levels of existing data (i.e. detail, accuracy, completeness)
- Flexible data model (unified, abstract modelling framework, which is required to cope with heterogeneous networks)
- Robust, theoretically well founded analytic and planning algorithms based on best engineering practices, matching the various levels of available network data
- Clear user interface, consistent, well-structured data and process visualisation
- Easy to manage iterative planning process

ARIADNE/NetAnalyst supports the medium term planning (dimensioning, expansion or reconfiguration) of any aggregate or backbone network according to several criteria (capacity, reliability and cost). It is a comprehensive tool, which covers all key aspects of modern network planning:
- Any physical or virtual/logical node can be included in the planned network
- "Client" (mobile services, synchronisation network or DCN) and "Server" layers (wireless or wireline physical connections))
- Topologies: single or parallel routes, bus, star/tree, mesh or ring are possible to plan with various protection methods
- Detailed analysis, covering scalability, failure impact, availability, service quality (QoS)
- Includes service planning with or without capacity extensions, network consolidation and reorganization

Any communications network operator, managed services or optimisation service provider, or OSS system integrator can benefit from the functionalities of ARIADNE/NetAnalyst.

Q: What are the business benefits?
A: There are numerous business benefits that ARIADNE/NetAnalyst can provide, some of them are easier to quantify, and some are more difficult to directly translate into financials. ►

► "Time to market", fast fulfilment of new capacity demands has been an important value element for long time. With the telecommunication equipment and their operation getting more affordable many communications network operators started to over-dimension their networks to be able to respond to new demands quickly. At the same time the fierce competition drives continuous cost reductions. These two competing requirements force CSPs to seek for the fine balance between spare capacity and cost. ARIADNE/NetAnalyst helps to find the balance with its capability to build scenarios fast, and also with reducing the time needed for a planning cycle.

There are many tools, mainly OSS based, that help to determine the quality, availability and reliability of an existing network. There are far less tools that do this in the planning phase. ARIADNE/NetAnalyst not only helps with availability and reliability predictions, it also calculates the impact of failure on other parts of the network (i.e. impact on other routes and services). This functionality can be used effectively to build contingency scenarios or determine availability for service level agreements.

Q: You have also helped companies in the area of Data Migration, could you talk about how you have helped companies in this area and the problems you overcame?
A: Data Migration is the Achilles heel of the projects. The best system is useless if the data is not correct. We always offer turn-key solutions to our clients that includes data migration, too. Our migration technology has been developing during the projects we have done, which enables FlexiTon to successfully master large-scale data migration projects in reasonably short time scale.

Special attention is given to continuous data updating after data migration, which is available for our customers also as a FlexiTon service after go live.

Q: FlexiTon is a long established company; could we talk about some of the global projects you have undertaken and the type of companies that you have worked with?
A: FlexiTon's telecommunication network management solution ARIADNE has been delivered to 29 countries (17 in Europe, 3 in Asia and 9 in Africa). There are both fixed-line and mobile operators among our clients.

Q: What are you ambitions for the year ahead and are then any landmarks that we should know about?
A: Recently we have put more emphasis to offer a wider product portfolio to the telco companies. Last year we announced the opening of CellTracker Centre of Excellence that was established with ctNova for strengthening the sales and project activities of CellTracker roll-out management solution fully integrated with ARIADNE.

This year some more complementing product co-operations will be announced.

At the same time via our channel partners we are planning to explore new markets in North and South America.

And finally, FlexiTon experiences a transition from product sales towards services. Operators are not so keen on owning and operating software, therefore SaaS is getting more and more important. ARIADNE/NetAnalyst based analysing and data updating services are responding to this change.

For more information visit:
www.flexiton.com