

# DIALOG MOBILITY MANAGER (R1.1)

## Introduction

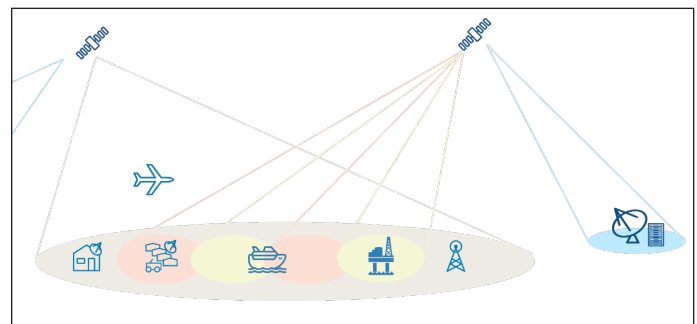
A mobility network typically requires multiple satellite beams to cover the target service area. Stitching together a multitude of beams typically results in using one or multiple satellites, having multiple gateways and overlapping beams.

Mobile terminals moving through the service area need to switch between beams of the mobility network. Key challenges for mobility networks are:

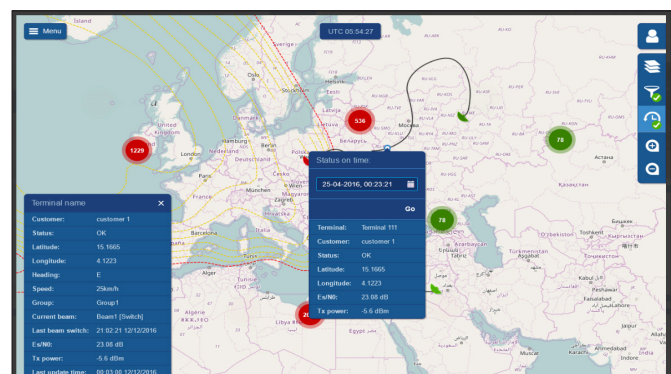
- Minimizing service outage during beam switches
- Selecting the most optimal beam for each terminal

The decision to switch to a specific beam can have a significant impact on:

- Cost – Different gateways can have different IP backhauling cost
- Service Level – when a lot of terminals communicate in the same beam, congestion can occur



The Dialog Mobility Manager provides a centralized beam switch decision logic, giving flexibility to mobility network operators to bring specific business logic in the beam switching decision making. This business logic can range from travel plans of mobile terminals up to reallocation of shared transponder power and bandwidth between spot beams to follow terminals.



DIALOG

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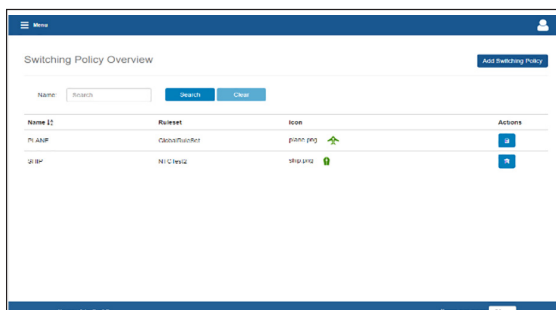
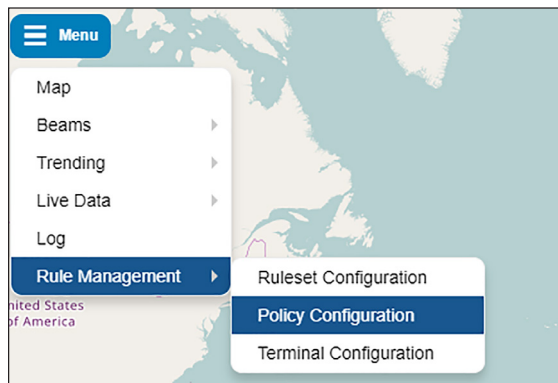
## Description

The Dialog Mobility Manager is a turnkey solution for managing mobility networks offering:

- Customizable Mobility Management Policies
- Efficient and Effective Service Assurance
- Streamlined Service Activation and Configuration

## Customizable Mobility Management Policies

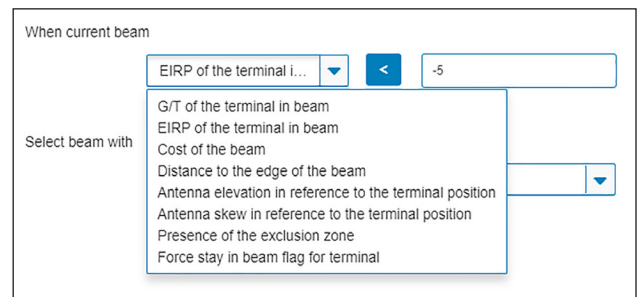
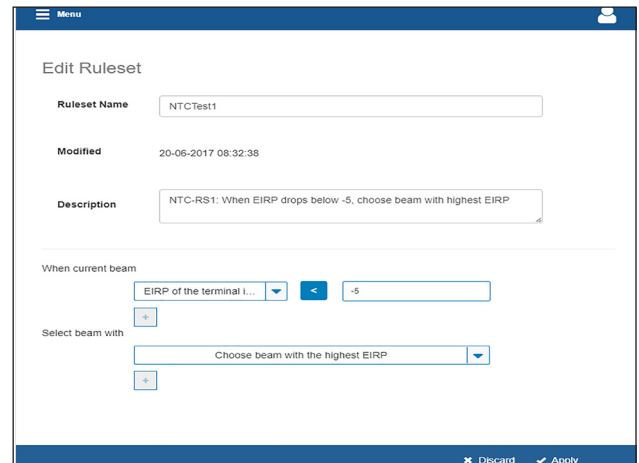
Multiple policies can be created e.g. depending on the Service Level Agreement (SLA) or type of mobile terminal.



Beam switching decisions are based on customized rules that combine information on:

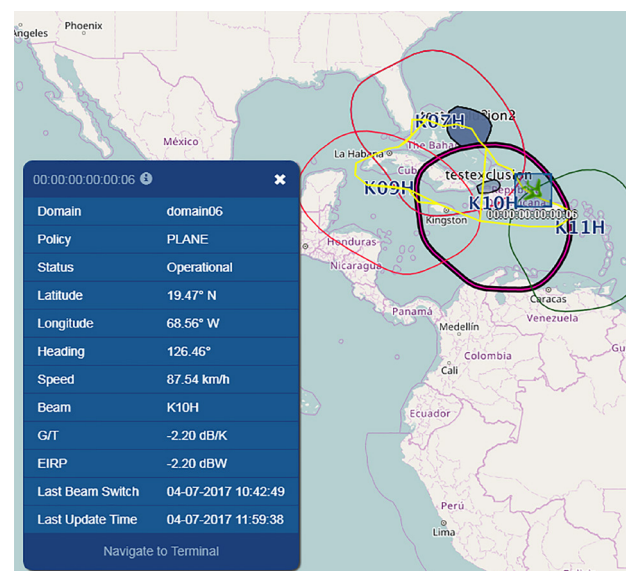
- a) Terminal position
- b) Beams' contours
- c) Beams' cost
- d) Exclusion zones
- e) Beam Load

Additional business parameters can be easily included in the rule set.



## Efficient and Effective Service Assurance

The Dialog Mobility Manager has a multilayer map GUI with zooming and filtering functionality for beams, terminals and exclusion zones. The information provided on these maps enable efficient management of the mobility network and rapid incident resolution.



## Streamlined Service Activation and Configuration

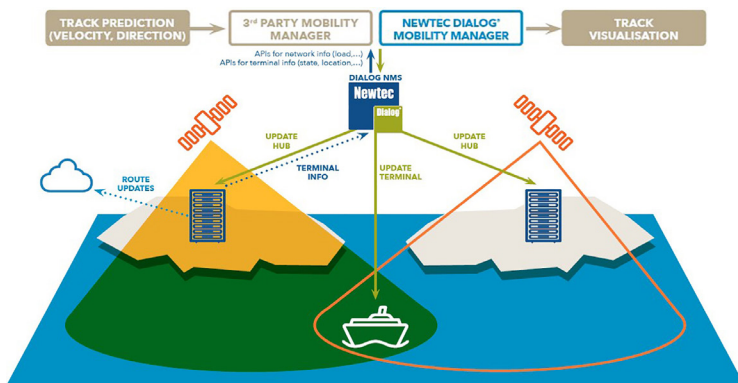
The Dialog Mobility Manager is fully integrated with the terminal provisioning workflow from the Dialog Network Management System (NMS).

## Beamswitching

A local Automatic Initial Beam Selection (AIBS) process on the terminal will control the initial network acquisition process. Once online, all subsequent beam switching will be controlled by a hub side process.

All the mechanics of beam switching are handled by the Dialog NMS. However, the actual beam switching logic and business rules are implemented in the Dialog Mobility Manager.

Mobile terminals in the Dialog network continuously send their location information to the central NMS. In the Dialog Mobility Manager, this location info is periodically used as an input for the decision making engine. From the list of eligible beams on a certain location, the customizable decision logic will select the most optimal beam.



## Applicable products

- **Hub Software Release**
- **The Mobility Manager is supported from Newtec Dialog 1.3 onwards.**
- **Modem Support**

The Mobility Manager supports the following modems using Mx-DMA® mode:

- MDM3X00
- MDM5X00
- MDM3310
- MDM2510