Alvarion’s RNP service provides detailed, cost-effective and reduced-risk radio deployment plans according to customer usage-profile requirements and a comprehensive analysis of the WiMAX network business and technical considerations. Leveraging Alvarion’s extensive experience in live deployments worldwide, the RNP service covers mobile, nomadic and fixed WiMAX deployments.

RNP customers receive relevant business considerations and cost-performance tradeoffs, enabling them to make well-informed decisions regarding investment, performance, coverage, capacity and phased deployments. Following a series of surveys which include frequency and EME measurements, Alvarion provides customers with comprehensive mapping and planning for the proposed radio deployment – a range of data such as the number of base stations, site locations, available frequencies, optimized channel tuning and guidelines for antenna installation.

- Minimize OPEX and CAPEX costs through business-driven radio planning which enables WiMAX networks designed to customer usage scenarios, such as population distribution, end-user services and required QoS level
- Identify the optimal cost-performance point and make informed business decisions by understanding the tradeoff between additional sites and more coverage and capacity
- Maximize ROI through the use of advanced radio planning tools, such as propagation simulation and interference analysis, tailored for WiMAX deployments, enabling better network/bandwidth utilization and connection of more users
- Achieve spectrum clearness and verify actual coverage through frequency, site survey and identification of interference areas and obstacle screening/fading
Site Surveys
Alvarion’s RNP service incorporates a thorough examination of target sites, which includes 360 degree photographs and coverage verification such as buildings and vegetation.

Frequency and EME Surveys
Alvarion’s radio planning service uses custom-designed tools to identify and measure potential external interferences in allocated frequency ranges. This is important to ensure that the entire bandwidth is available for selling services to end-users and to prevent the illegal use of the spectrum, which can significantly affect the available bandwidth and revenues from end-users.

Radio Network Planning for Mobile, Nomadic and Fixed WiMAX
Alvarion’s RNP service is for mobile, nomadic and fixed WiMAX deployments. Based on a field-proven methodology coupled with a comprehensive set of advanced simulation tools, it enables accurate planning with all relevant criteria, from clutter characteristics and bandwidth availability to target reuse factors and end-user traffic profiles.

The RNP service, which is offered on both 2D and 3D cartographic databases, includes the following main activities:

- Coverage prediction (only in 3D) to determine estimated coverage areas
- Frequency planning to define optimal channel allocations
- Capacity calculation to estimate the equipment required per sector
- CPE association and alignment (only for fixed deployments) to link CPEs to base stations and recommend the best CPE positioning

State-of-the-Art Planning Tools
Alvarion uses an advanced set of radio network planning tools in order to provide its professional RNP services, including:

- 3D analysis for diffraction, obstacle analysis and terrain profiling
- Ray tracing for studying delay, reflection and scattering
- CPE simulation for mobile and nomadic CPE distribution, indoor CPE simulation and floor-level reception predictions
- Coverage prediction for receiver signal strength (RSS) analysis
- Frequency planning for allocation of sector frequencies
- Dimensioning tools for automatic calculation of necessary equipment
- Site selection algorithms
- Link budget and capacity calculators

About Alvarion
Alvarion (NASDAQ:ALVR) is a global 4G communications leader with the industry’s most extensive customer base, including hundreds of commercial 4G deployments. Alvarion’s industry leading network solutions for broadband wireless technologies WiMAX, TD-LTE and WiFi, enable broadband applications for service providers and enterprises covering a variety of industries such as mobile broadband, residential and business broadband, utilities, municipalities and public safety agencies. Through an open network strategy, superior IP and OFDMA know-how, and ability to deploy large scale end-to-end turnkey networks, Alvarion is delivering the true 4G broadband experience today (www.alvarion.com)