Mobile Devices

Developments you can depend on

roke

Innovative solutions packaged for mobile devices

The requirements for mobile devices are always evolving, now at a faster pace than ever before.

Roke's services are packaged to suit the needs of a changing market.

Roke leads the way in mobile terminal development from the first GSM devices to the latest LTE and WiMAX technology. Our research, product development and business process expertise ensure that our customers always produce cost-effective, market leading products with a rapid turn-around from concept to market introduction.

Our unique offering is to deliver solutions to our customers in the category of *'First, Fast & Difficult'*.

The innovation and expertise developed over a long history of successful developments and world firsts has now been packaged to suit the needs of today's customers. Our packages include:-

- Product innovation services
- First to market assurance
- Product consultancy
- Production support, type approvals and test

Product innovation services

Smart services • Smallest size • Lowest power

Powered by a unique blend of Engineers, Physicists and Mathematicians, Roke provides you with the innovation you need to set you apart from your competition.

Q Need performance for your latest algorithm?
*A Thought of using **GPU Processors**?*

Q Need a compact multi-band antenna in one device?
*A Thought of **'exploitation of the full device volume as an antenna'**?*

Q Need to bring power consumption down?
*A Thought of creating a **Mixed Signal/RFCMOS ASIC**?*

Q Need to get mobile users connected to your service
*A Thought of developing **Mobile Enterprise Applications**?*

Case study

Smart services – mobile enterprise	
Customer	Telnic
Challenge	To provide an innovative online address book service, with high performance and capacity and low operational and start-up costs. As a small organisation, Telnic had no in-house technical resources but still required a rapid development with a low associated burn-rate.
Approach	Roke applied expertise in DNS and mobile enterprise to develop the technical concept, provide a turnkey product for the mobile clients, and design the end-to-end technical solution, allowing Telnic to provide a genuinely new service that met all of its goals and achieved a successful roll-out.
Benefits delivered	The .Tel domain service was launched globally on 3rd February 2009. With innovative use of DNS (at the heart of the Internet) a service is provided that is both genuinely different from other domains like .com and is designed for a global market and a global scale. It allows customer-provisioned contact data to be shared across the world, in real time, at low cost, with carrier grade performance and reliability.

First to market assurance

With a track record of world firsts in the mobile devices industry, Roke is the ideal partner to ensure your product is first to market.

Q How can we assist you?

A
- *Beat the competition by using our* ***Reference Design Service***
- *Become the industry standard with our* ***Test Terminal Development Service***
- *Accelerate your RF design with the* ***Compact Design & Layout Service***
- *Go for performance with low power using our* ***Protocol & Algorithm Implementation Service***
- *Harness reference designs without compromise using our* ***Antenna Design Service***
- *Race through type approvals with our* ***Approvals & Test Service***

Case study

Compact design	
Customer	Siemens/4G Systems
Challenge	Develop fully working, production ready, sample HSDPA data cards in just 3 months for demonstration of the first public HSDPA link at GSMA Mobile World Congress.
Approach	Build on existing relationships with chipset suppliers to accelerate development times. Apply expertise in mobile device design, layout and antenna development. Full type approvals executed in-house and with partners to take the product to full launch 12 months later.
Benefits delivered	Siemens were the only organisation able to publicly demonstrate a full HSDPA data card product sample 3 months after chipsets were released by the vendor. Siemens demonstrated a "first to market" product which has since been used by operators to test the deployment of infrastructure.

Product consultancy

Roke has the full suite of consultancy services designed to support the creation of market leading mobile devices.

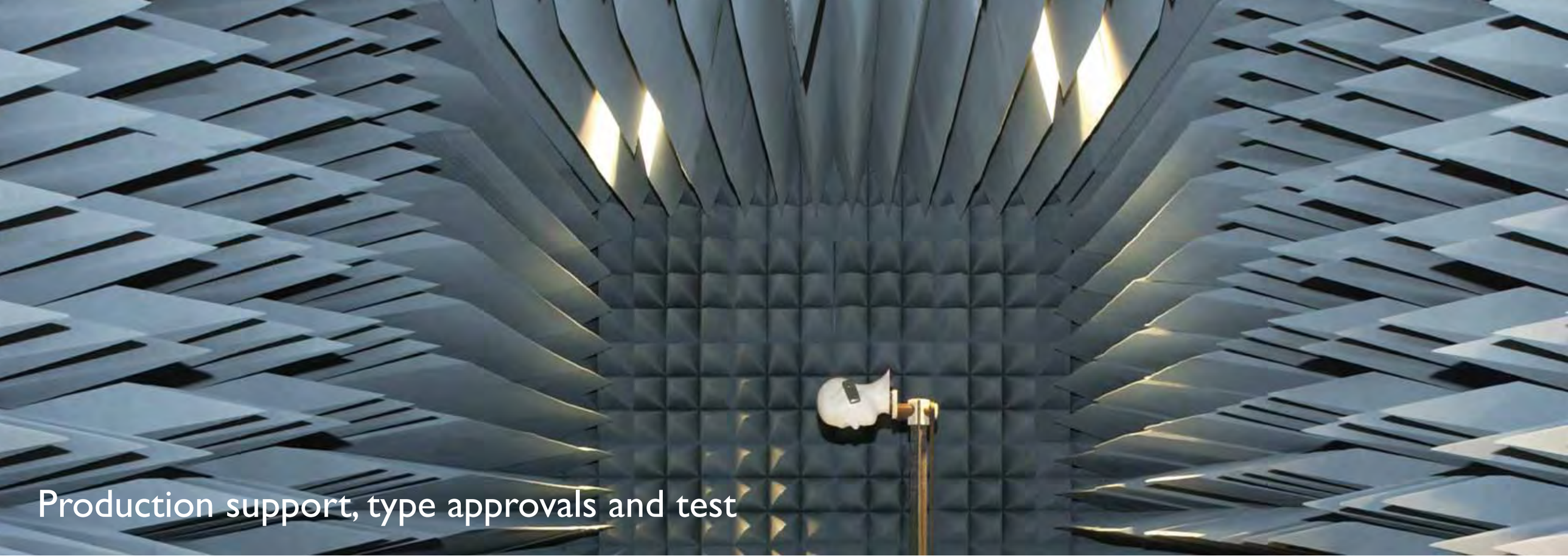
There are many good reasons why we should be your development partner of choice

- Over 50 years of mobile design and development
- Expertise from concept phase to full scale development
- Fast, flexible and multi-disciplined engineering resource
- Continuously influencing and contributing to ETSI & IEEE standards

Concept consultancy			
Technology studies	Strategic design	Innovation	Proof of concept

Design and development support			
System design • Standards appraisal • Feasibility studies • Behavioural modelling • Simulations	Hardware development • Baseband (DSP/FPGA/ASIC) • RF (Radio and PA) • Multi-band antennas • PCB design and dense layout	Software development • Radio algorithms • Protocol stack development • User applications	Enclosure development • Mechanical design • Thermal analysis

Manufacture and post development support			
Manufacture	Factory test	Type approvals	Product integrity



Production support, type approvals and test

Roke has the experience, expertise, equipment and partnerships to support your mobile product development through type approvals and manufacture.

CTIA compliant Mobile Antenna Testing Facility
The tests carried out in our facility examine the connectivity of the handset, the quality of an antenna's transmission and reception signals and detect manufacturing faults. As well as ensuring the end user has a guaranteed level of quality, the CTIA's standards allow network providers to quickly evaluate new phones to be introduced to the market.

Case study

Product development	
Customer	Signature Industries
Challenge	Looking to build on their excellent reputation in the search and rescue beacon market, Signature Industries were looking for a development partner to deliver the next generation Personal Locator Beacon (PLB).
Approach	Initially Roke was asked to quote for the electronics development of the new PLB, but as SI's confidence in our capabilities grew we were asked to quote for the complete product development which included concept, development, electronics, mechanics, software and development testing. Production Automated Test Equipment (ATE) was also developed.
Benefits delivered	The resulting Personal Locator Beacon not only ensured that Signature Industries secured their lead customers, but also set new standards at a global level for functionality and performance versus weight. The PLB ensured that Signature Industries remain in a dominant market position.

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