

SAMPSON Radar

Our contribution to the world's first active S-band phased array naval radar

With over 30 years of radar expertise, Roke Manor Research – in conjunction with BAE SYSTEMS – was instrumental in the development of the SAMPSON multi-function radar. SAMPSON is a fundamental part of the advanced air defence system for the Royal Navy's Type 45 destroyers.

BAE SYSTEMS

TYPE45
DESTROYER
PARTNER



Datasheet

Roke Manor Research Ltd
a Siemens company

Picture courtesy of BAE Systems



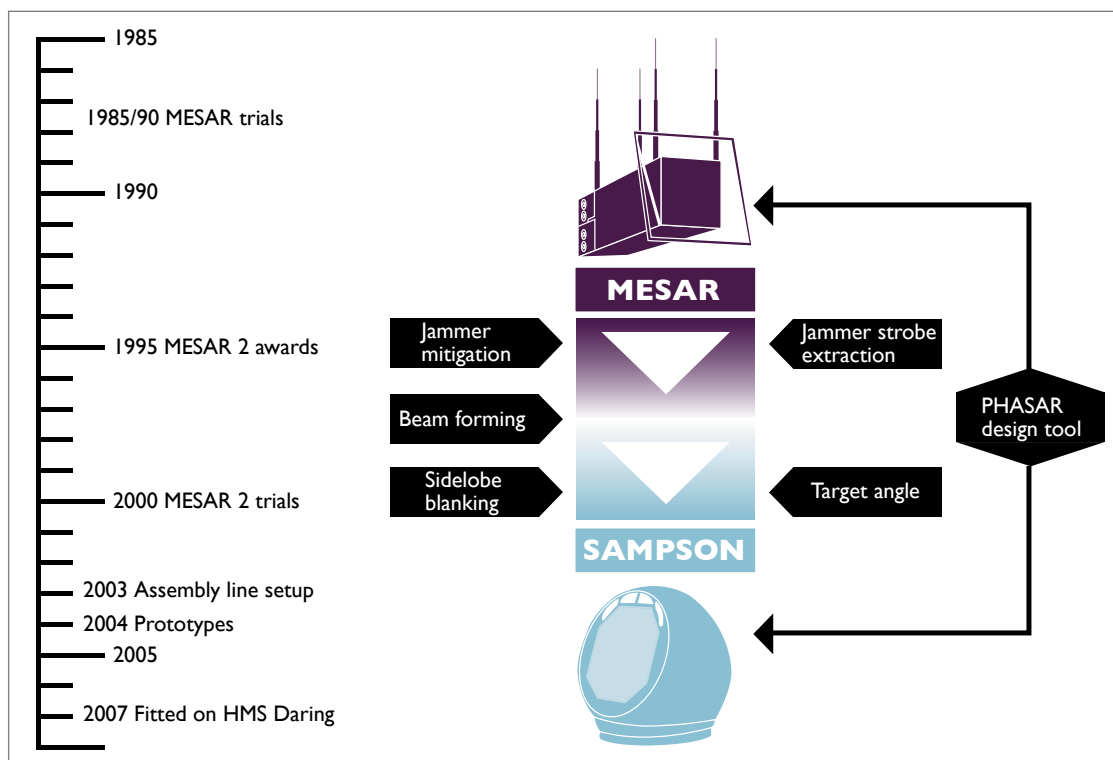
SAMPSON, which is the result of over 20 years collaborative research and development within the MESAR programme, is significantly more powerful than existing systems. It can handle multiple threats simultaneously and is virtually immune from jamming. SAMPSON's advanced design allows a single radar system to perform several tasks, such as surveillance and tracking, which would otherwise require a number of separate systems.

SAMPSON's active phased array antenna comprises thousands of small, solid-state transmitter and receiver units. These allow the radar beam to be moved at electronic switching speed rates. It supports point and area defence against current and future air threats in an environment of heavy jamming, amid land and sea clutter.

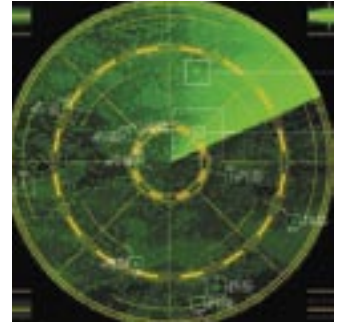
It is one of the first radars in the world to use digital adaptive beam forming, which makes it virtually immune from all forms of electronic jamming. Its modular design reduces the through-life costs, whilst significantly increasing availability.

Our experts have unrivalled experience of working on high-risk prototype systems. By using our proven tools and techniques, such as the phased array radar modelling tool, PHASAR, we are able to design systems with greatly reduced technical risk.

As a result of our successful contribution to SAMPSON, we entered a teaming agreement with AMS (now BAE Systems) and QinetiQ and are all working with the US Navy on a joint UK/US Navy phased array programme, ARTIST.



Roke's contribution over time to the SAMPSON project

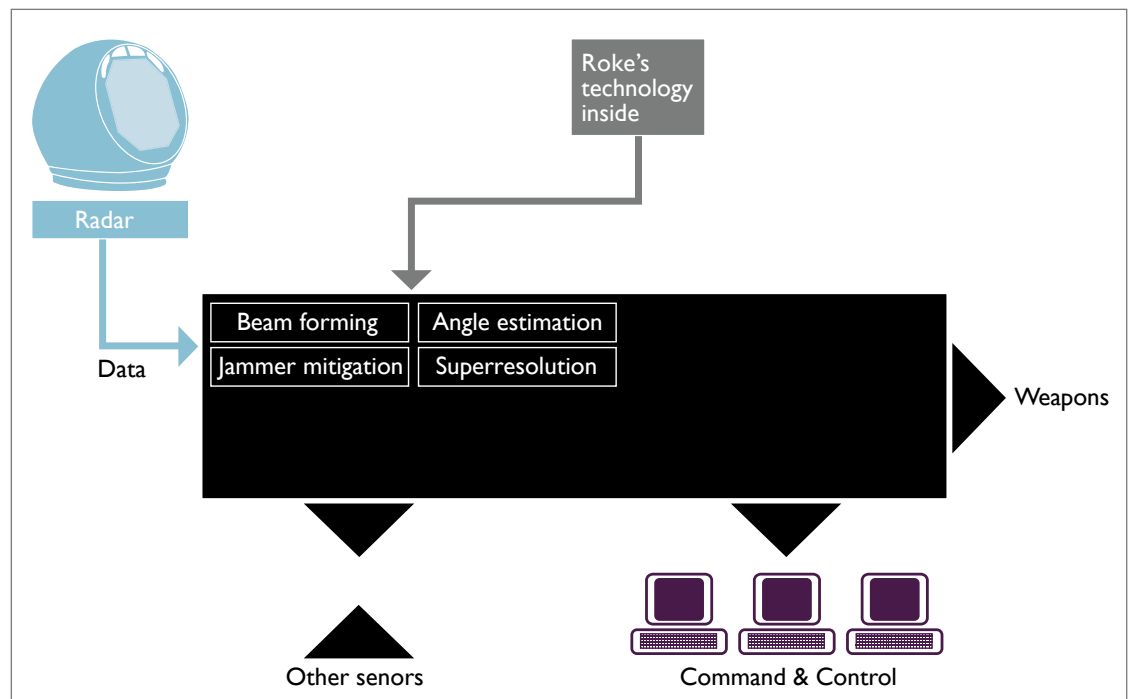


A Key Defence Player

Roke has been a key technology provider to the defence industry since it was founded in 1956, and remains as dedicated to this market today as ever. Over the years we have diversified into other sectors, enabling our defence customers to take advantage of knowledge gained on leading-edge commercial technology and enjoy reduced costs and development times.

We pride ourselves on being world-leading adaptive beamforming technology experts; we have the ability, for example, to adapt an antenna to suppress all forms of interference. Our success in this field is highlighted by the high number of international collaborations that we have been invited to take part in. Our radar specialists work across the whole spectrum of radar design and development. We have carried out work on large radar systems for naval and military customers, including 'first off' prototypes or special designs to meet specific customer requirements. We also work on airborne systems, including weapon systems, for example missile seekers and fuzes, as well as commercial radars such as 77GHz automotive sensors.

If your requirements are similar to those described above, please call, or visit our website at www.roke.co.uk



Roke's technology used in the SAMPSON project



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