Overview

- The UCL Radar Group has just launched a ‘NextRAD’ experimental radar project.
- A bistatic/multistatic radar has two or more active sensors distributed in a field, with much potential to gather a variety of information about its targets.

Expected Features of the New System

- Multiband and wideband transceivers.
- Flexible and powerful signal processing environment enabled by Rhino SDR boards.
- Nodes synchronisation is a primary technical issue, which will be resolved by applying IEEE-1588 precision time protocol for more reliable and flexible clock and frequency synchronisation.
- User-friendly and automation functions.
- Useful in a variety of experiments on such topics as multiband clutter and targets; micro-Doppler; RCS; and MIMO radar.

UCL NetRAD System

- A unique, low-cost netted radar, developed at UCL.
- Consists of three nodes that can transmit and receive S-band signals individually.

Bistatic sea clutter and target measurements were carried out in 2011 in South Africa, which led to the discovery of a unique characteristic of bistatic/multistatic sea clutter [1].