



Center for High-Frequency Technologies and Applications

# ***Antennas and Propagation***

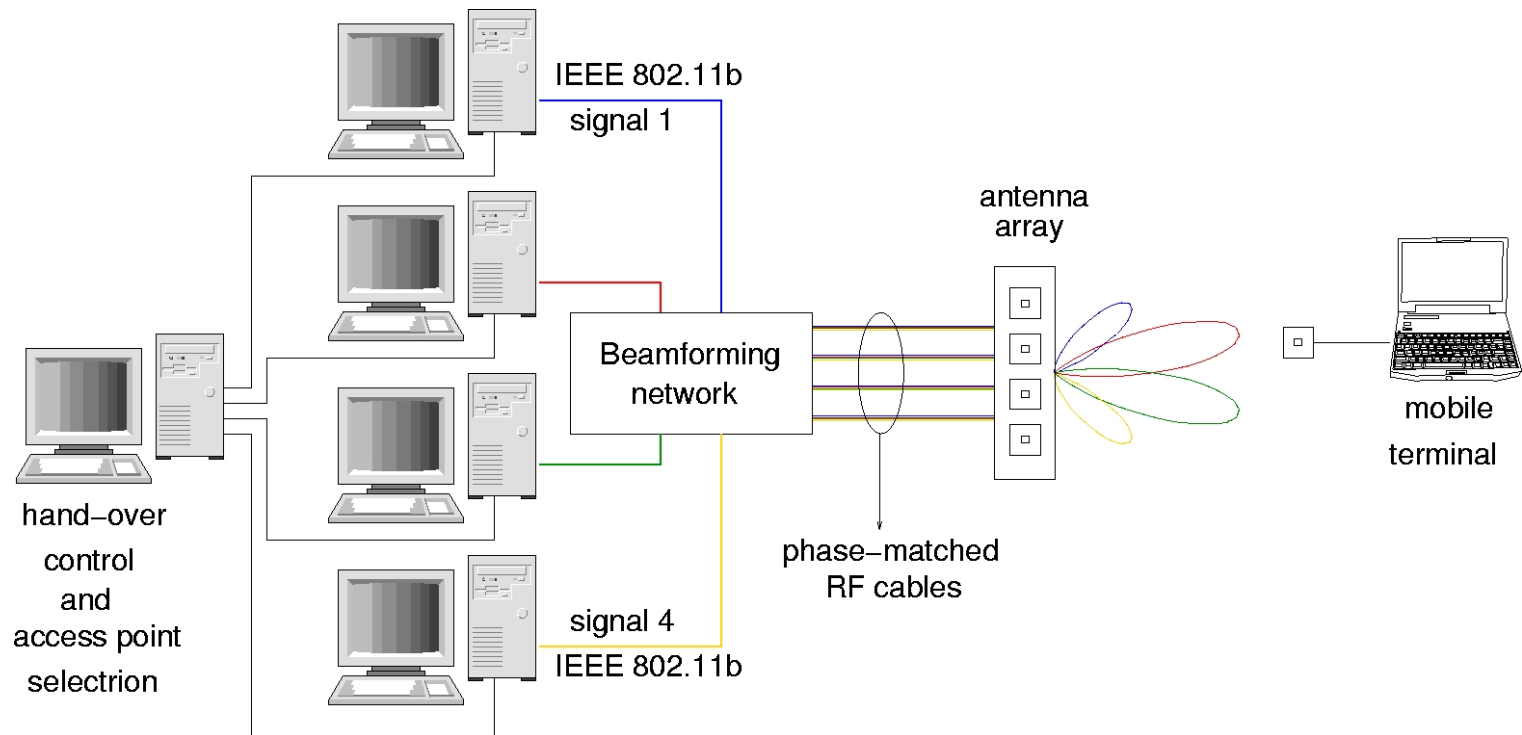
Dr. ir. Dries Vande Ginste  
Technology Developer

- Characterization of properties of wireless channels: path loss, multipath delay spread, fading characteristics, ...
- MIMO systems: antenna and channel modeling in indoor and mobile environments
- Direction of arrival (DOA) estimation for smart antenna systems
- Mutual coupling in antenna arrays

→ *Both theoretical study and experimental verification*

## ■ Applications and examples

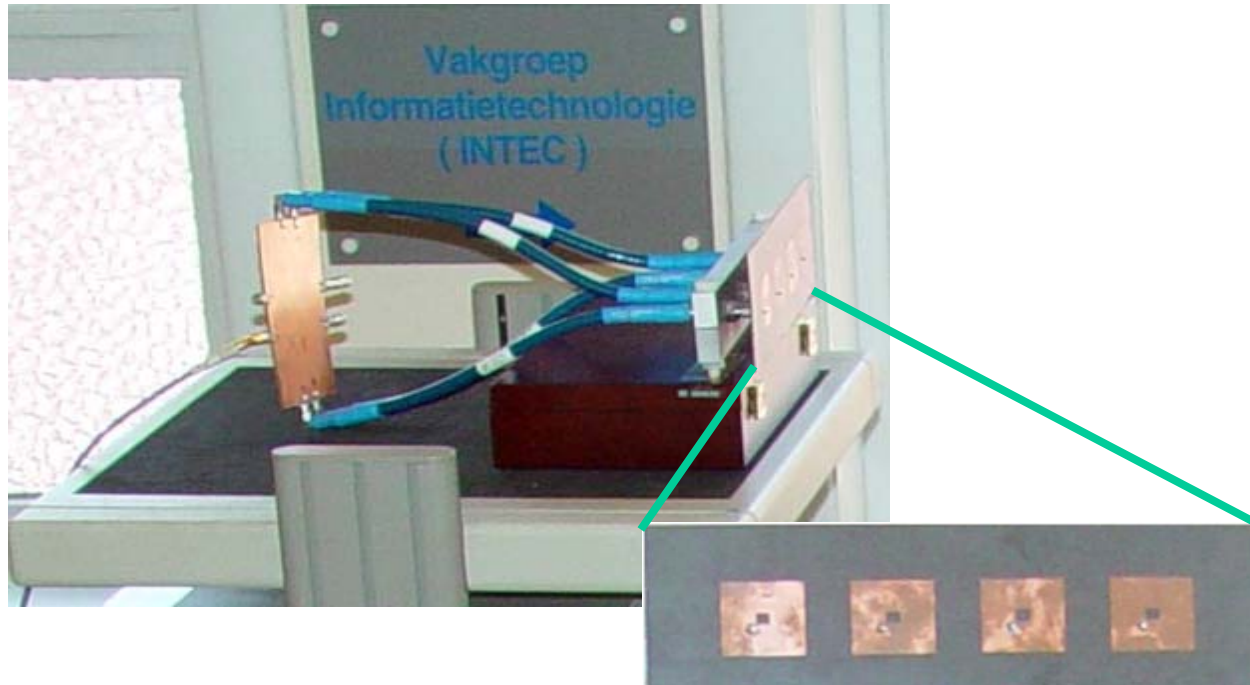
- Switched four-beam antenna system for IEEE 802.11b protocol



*Measurement setup built in order to test new wireless protocols*

## ■ Applications and examples

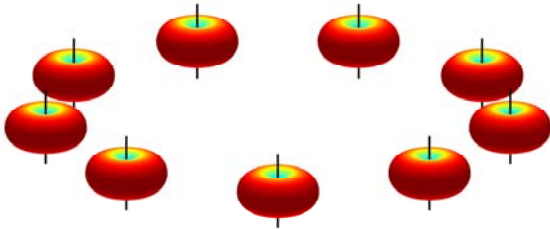
- Switched four-beam antenna system for IEEE 802.11b protocol



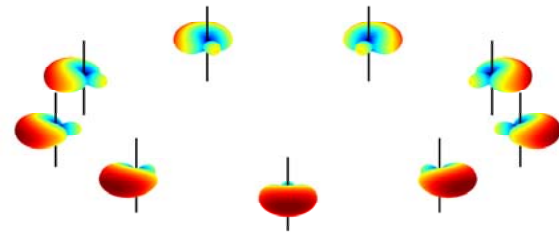
*Measurement setup built in order to test new wireless protocols*

- Mutual coupling (MC) in uniform circular arrays (UCA) and DOA-estimation

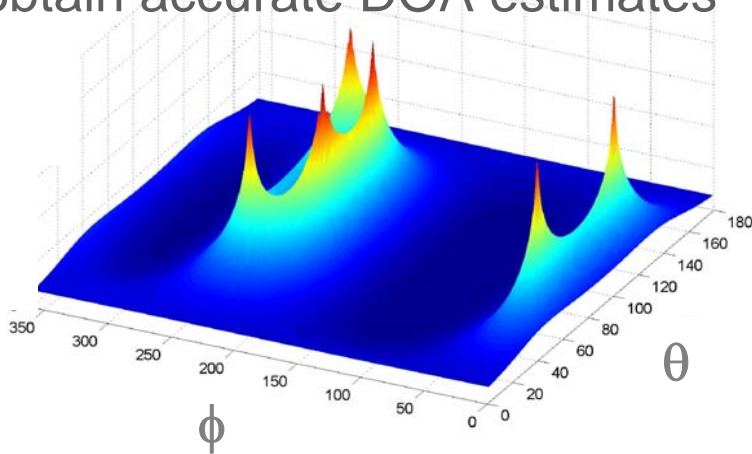
*MC neglected*



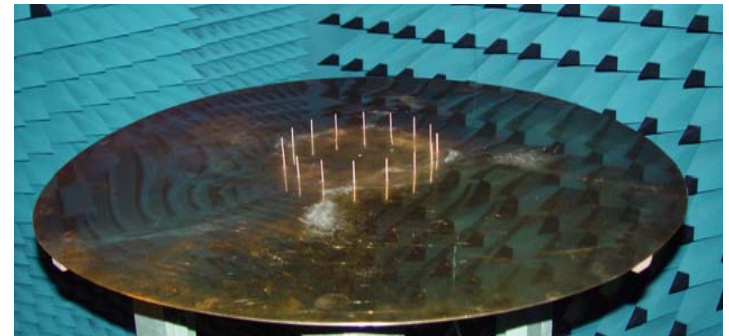
*With MC*



Correct description necessary to obtain accurate DOA estimates



UCA made of 16 monopoles



Dr. ir. Dries Vande Ginste  
Technology Developer

Center for High-Frequency Technologies and Applications (CHiTA)  
Dept. of Information Technology (INTEC) - Ghent University  
Sint-Pietersnieuwstraat 41  
B-9000 Gent  
Belgium

Phone: +32 9 264 33 54

Fax: + 32 9 264 99 69

Email: [Dries.Vande.Ginste@intec.UGent.be](mailto:Dries.Vande.Ginste@intec.UGent.be)

Website: <http://www.CHiTA.be/>