

European Wireless

Nicosia, 10 - 13 April 2005

Personal Wireless Environments

*John Dunlop
Mobile Communications Group
University of Strathclyde
Glasgow, Scotland*



UNIVERSITY OF
STRATHCLYDE

Service Delivery



UNIVERSITY OF
STRATHCLYDE

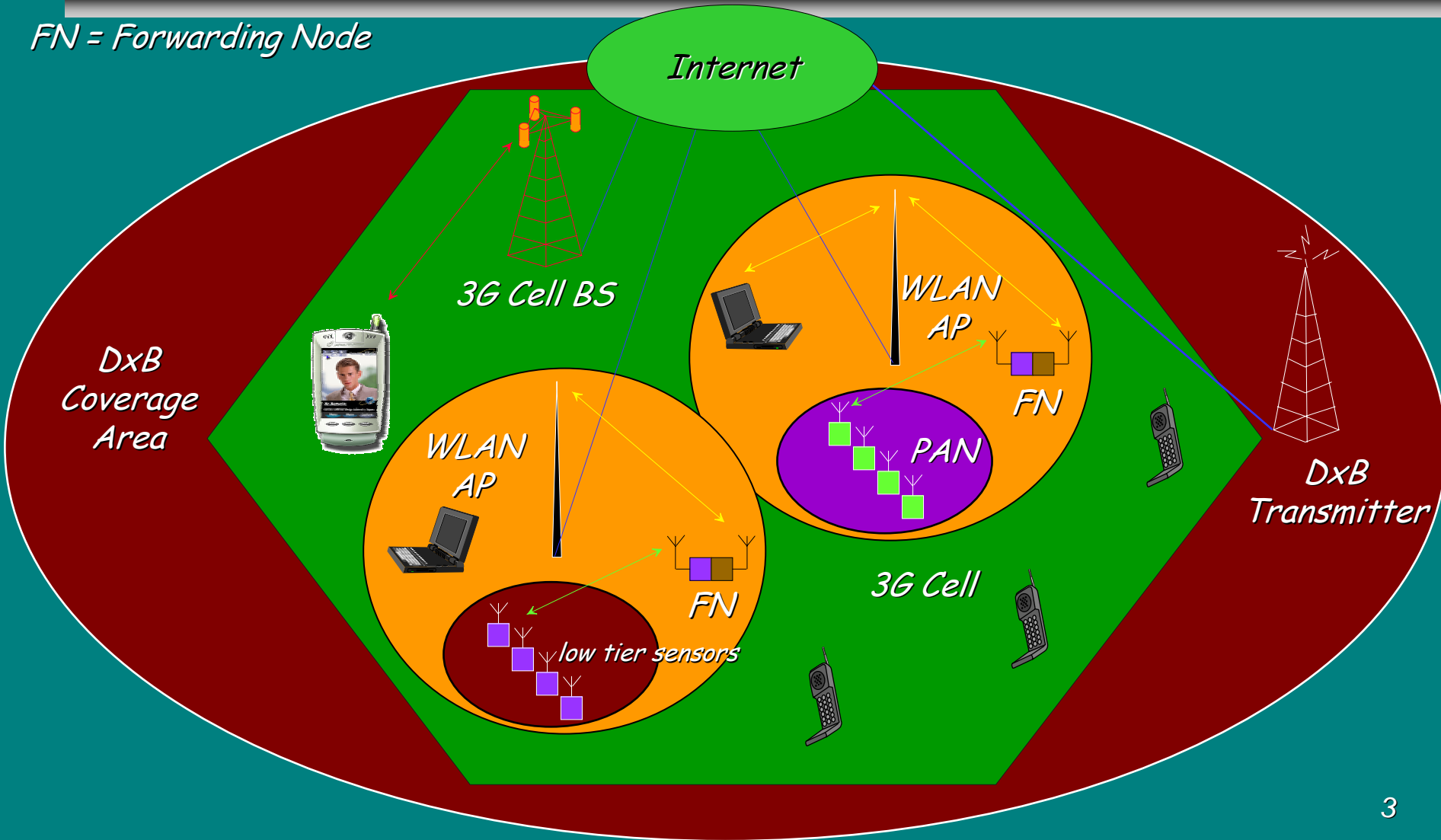
- Recent interest in the delivery of services via cooperative operation of heterogeneous wireless networks, based on:
 - 3 service tiers (cellular, WLAN, personal area)
 - Base Stations (BS), Access Points (AP), Forwarding radio Nodes (FN), user devices
 - automatic discovery and power management protocols
 - Self organising, hierarchical, ad-hoc multi-hop routing
- Digital Broadcasting (DxB) has potential for inter-working with the hierarchical system.

Heterogeneous Wireless System



UNIVERSITY OF STRATHCLYDE

FN = Forwarding Node



Content Delivery: User Perspective



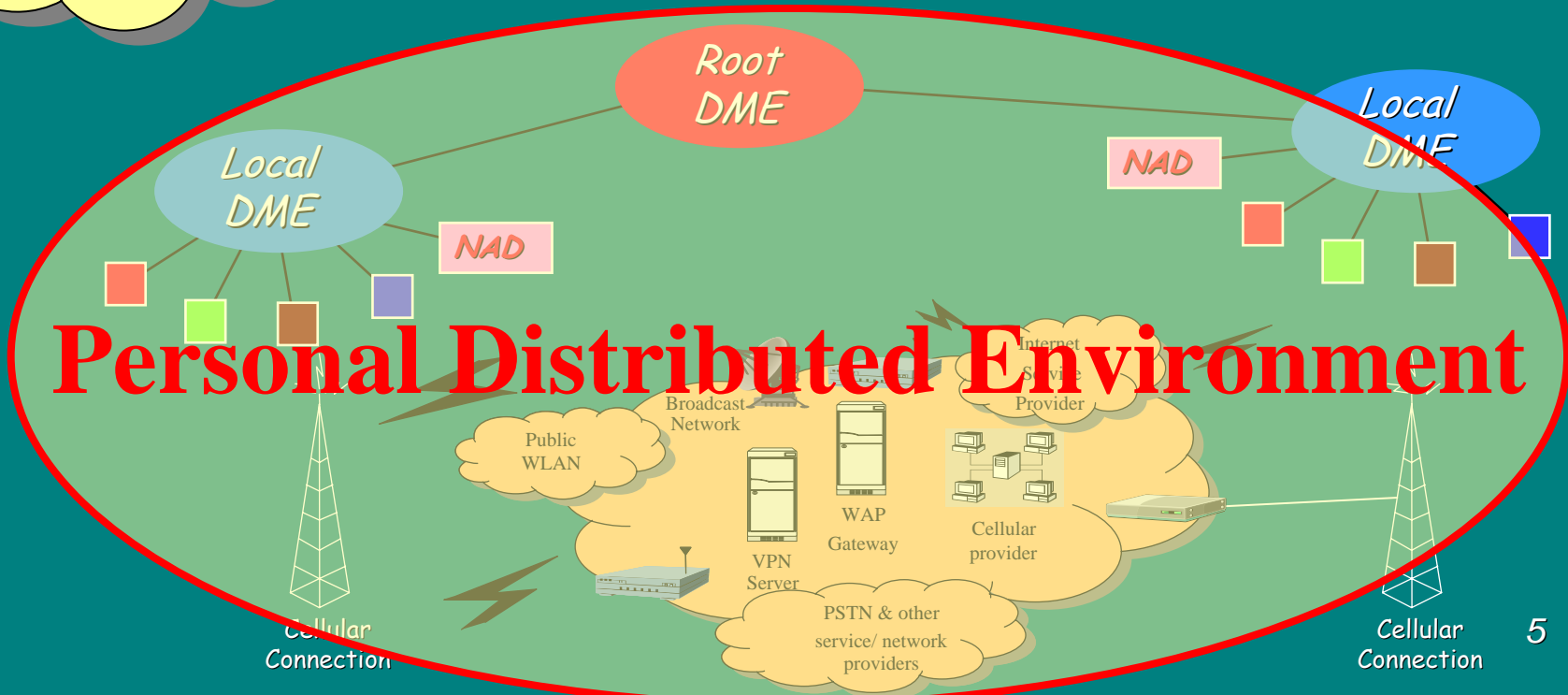
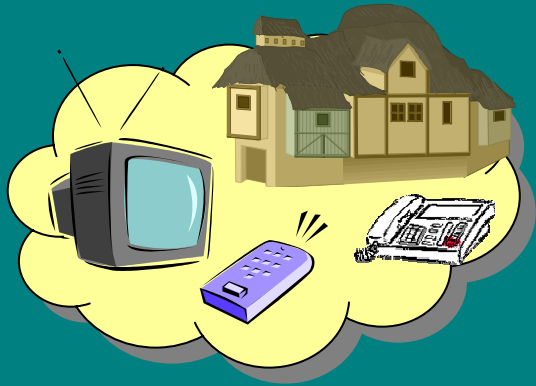
UNIVERSITY OF
STRATHCLYDE

- Content may be delivered by a variety of mechanisms
- The “user terminal” will evolve into an *environment* able to accept content from a variety of networks
- The user will be able to choose the delivery mechanism
- The choice will vary with location, time and service type.
- This introduces the concept of a **Personal Distributed Environment** (PDE)

The Personal Distributed Environment was first specified by the UK Virtual Centre of Excellence in Mobile and Personal Communications (MobileVCE)

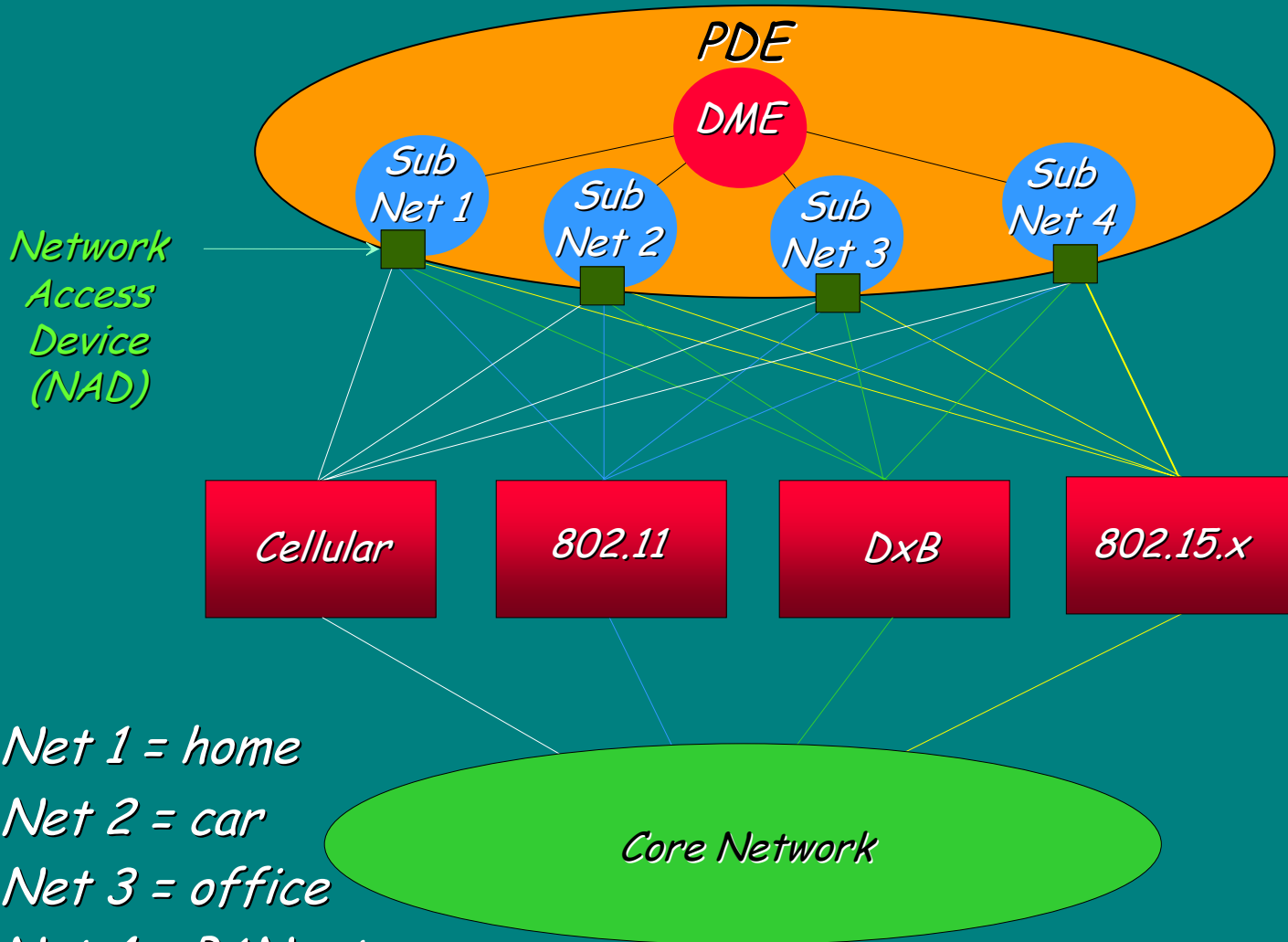


The PDE Concept





PDE Sub Networks



- Sub Net 1 = home*
- Sub Net 2 = car*
- Sub Net 3 = office*
- Sub Net 4 = PAN, etc*