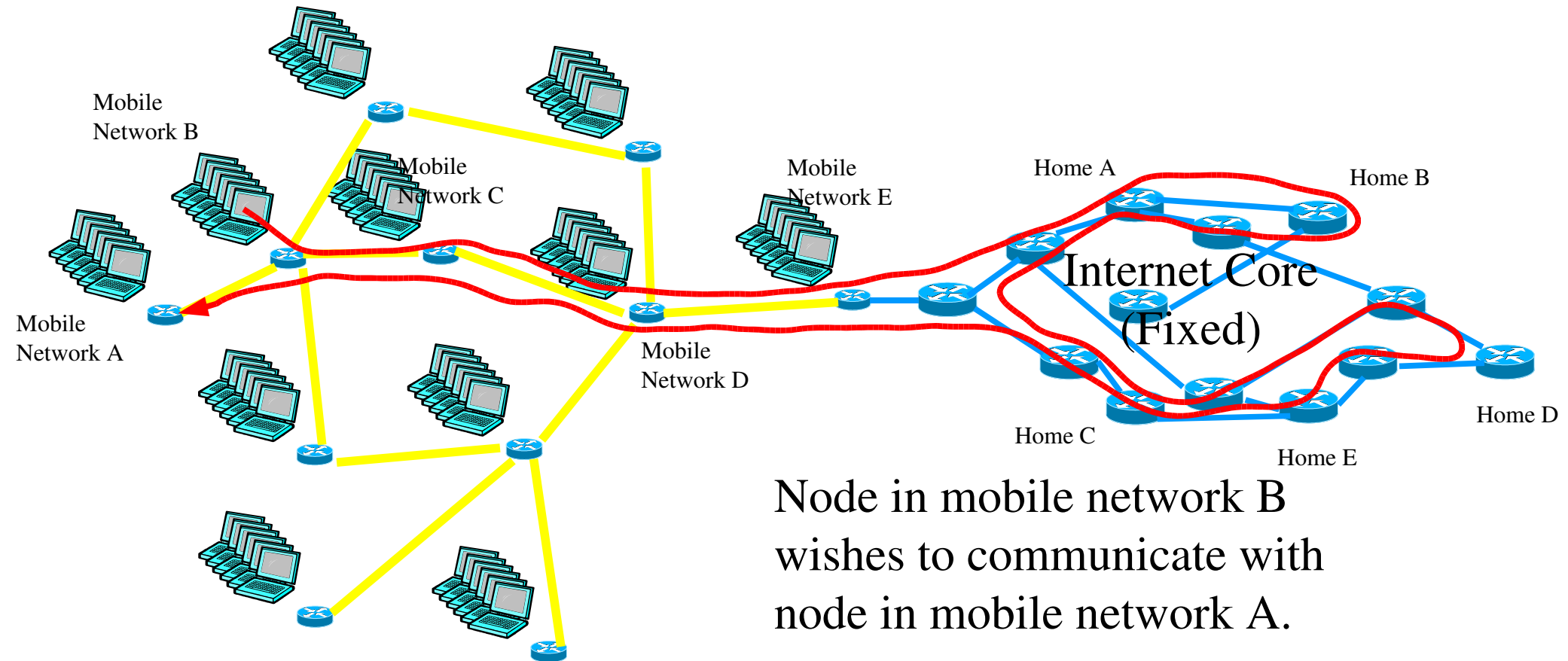


MANET-based Nested NEMO Route Optimization

Thomas Heide Clausen, Emmanuel Baccelli
Ecole Polytechnique, France

Ryuji Wakikawa
KEIO University/WIDE, Japan

NEMO-to-NEMO

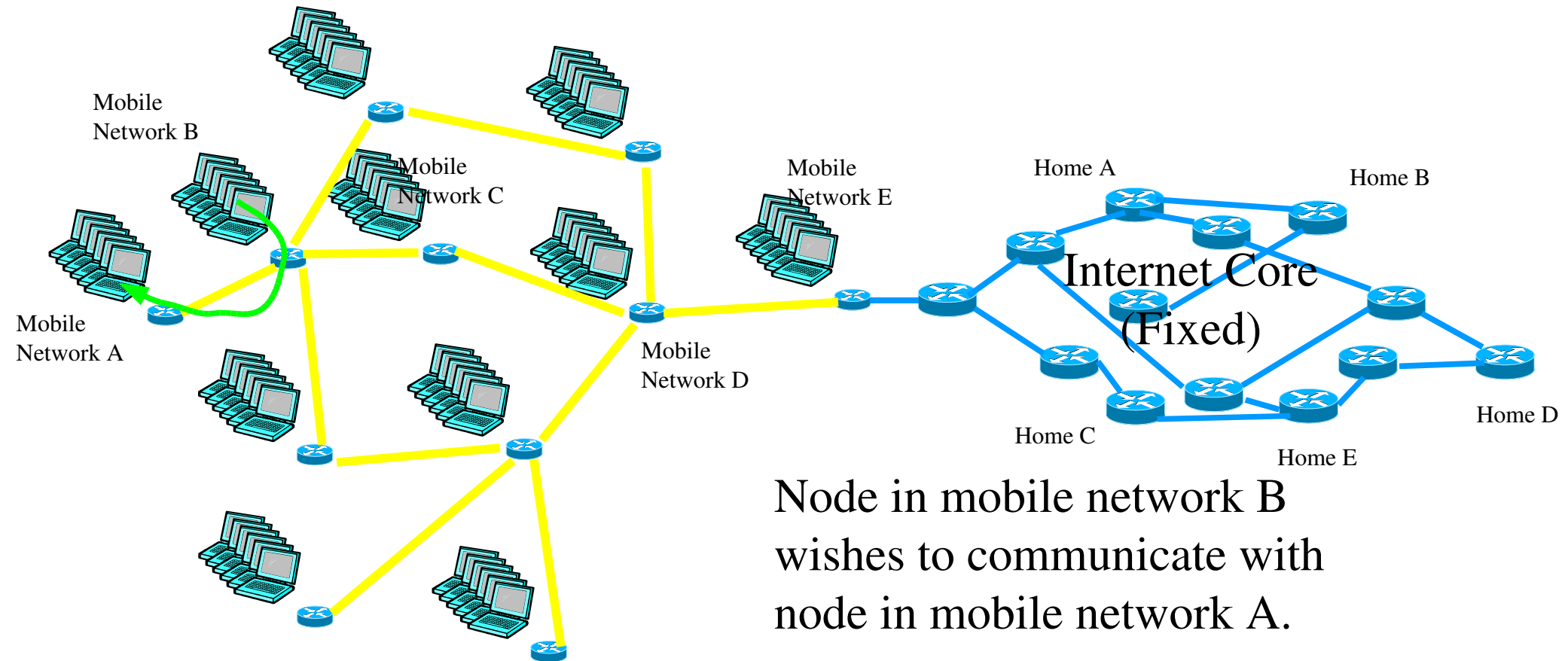


Node in mobile network B wishes to communicate with node in mobile network A.

Basic solution: nested NEMO

Con: suboptimal routes, nested encapsulation of all data traffic.

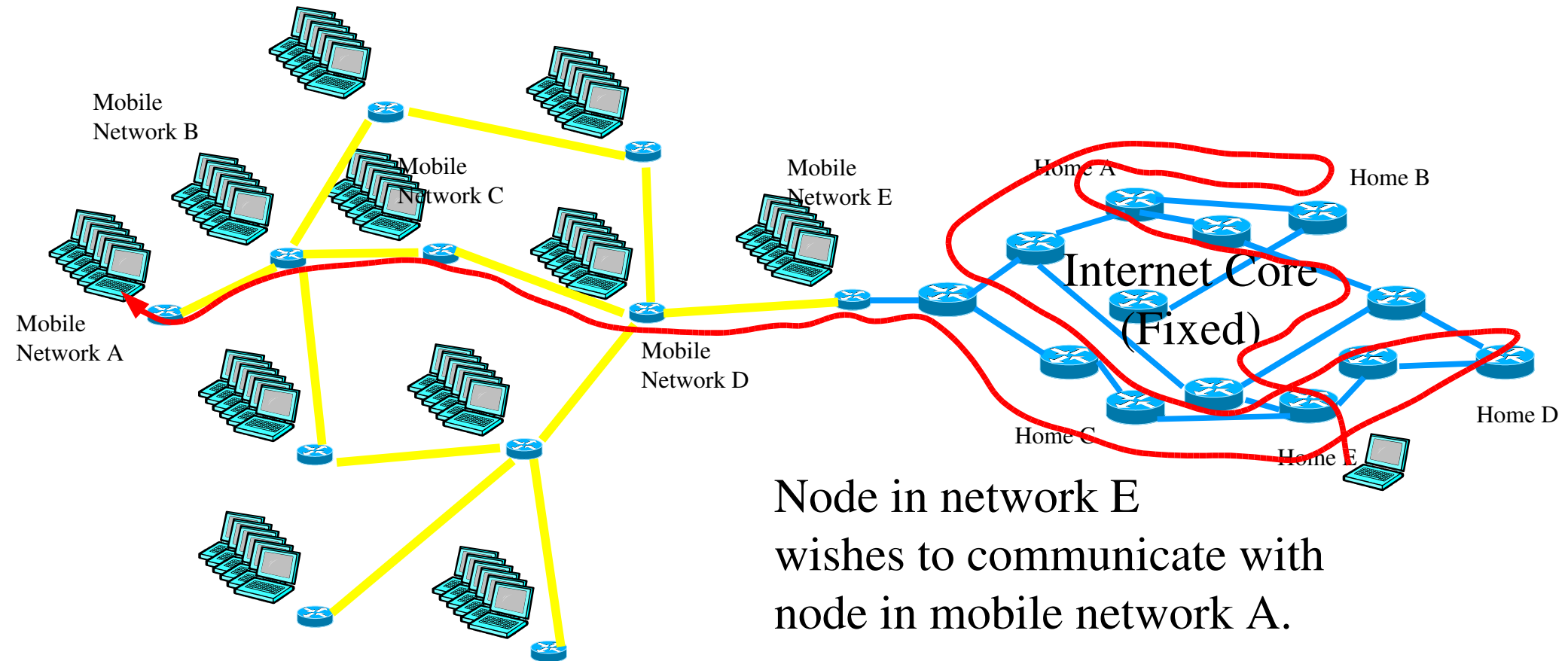
NEMO-to-NEMO



Node in mobile network B
wishes to communicate with
node in mobile network A.

Smart solution: consider mobile routers as part of a
MANET – run OLSR for route maintenance &
optimization.

Internet-to-NEMO

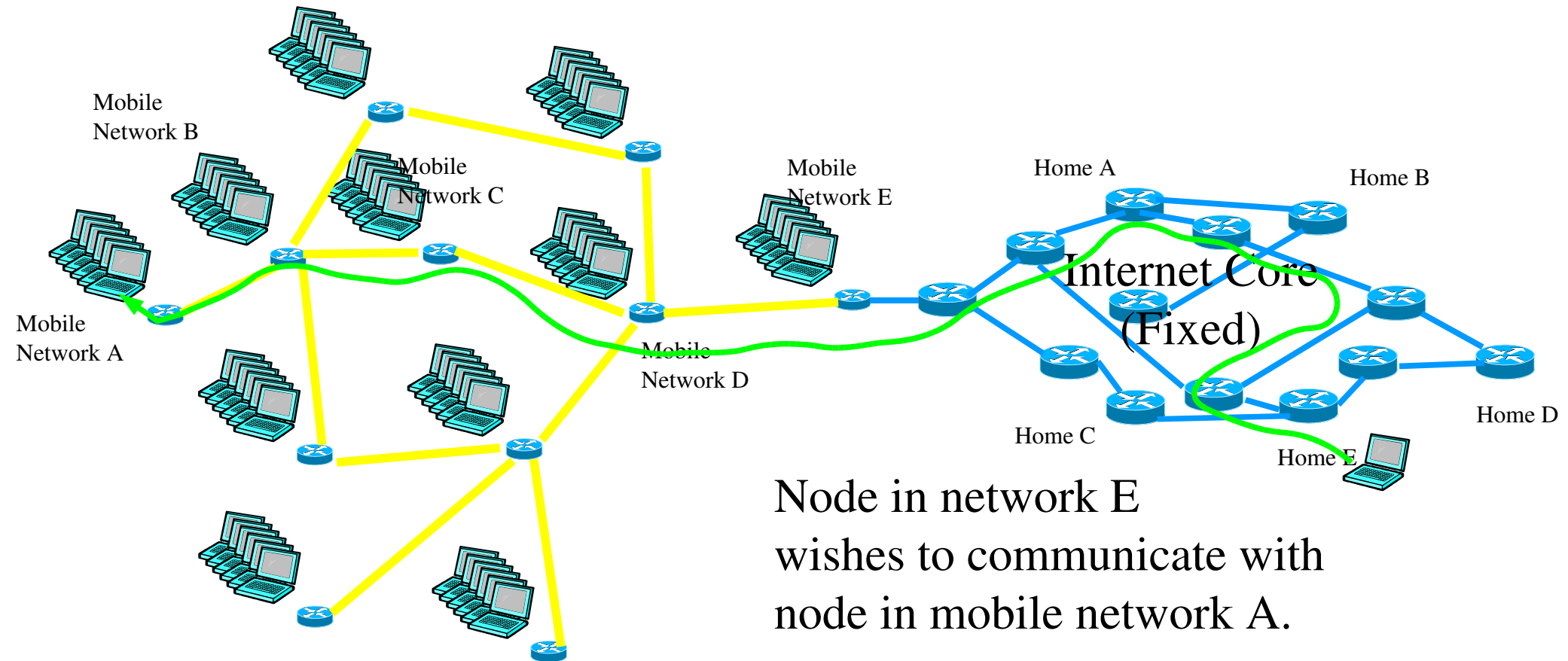


Node in network E
wishes to communicate with
node in mobile network A.

Basic solution: nested NEMO

Con: suboptimal routes, nested encapsulation of all data traffic.

Internet-to-NEMO



Smarter solution: OLSR within nested NEMO, inform home agent of A that point-of-attachment is through mobile network E. (Same overhead as 1 niveau of nesting)

Possible combination with CR for shorter tunnels?

Goals

- draft-clausen-nemo-ro-problem-statement-00.txt
 - contribute “MANET” solution to RO problem statement,
 - merge with other RO-problem-statements.
- General:
 - route optimization in dynamic networks: long-time MANET experience → avoid “reinventing the wheel,
 - possible cross-fertilization:
 - requirements from NEMO → MANET,
 - experience/lessons learned from MANET → NEMO.