



UMOBILE Project, Expo Emergenze 2016

June 3-5, 2016

Bastia Umbra (PG), Italy



Objectives of the Project

Improve Internet pervasive access by:

- Moving from the traditional host-centric access paradigm to a data-centric model
- Creating a communication model robust to intermittent connectivity

HOW?



Objectives of the Project

Combine two emerging networking paradigms:

- Information Centric Networking (ICN)
- Delay Tolerant Networking (DTN)

Integrate:

- Social trust computation
- Cooperative incentive modeling
- Individual and collective behaviour inference



Innovative aspects

Information-centric communications

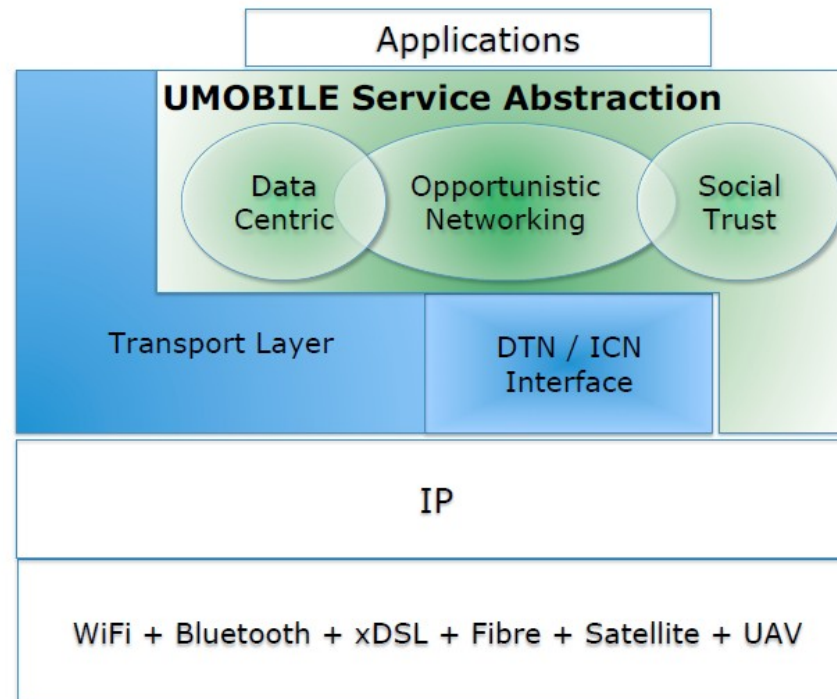
- Communications based on data interests expressed passively or actively by the user
- Uniform abstraction: simple API to request, capture, and make data available
- Pervasive caching policies

Intermittent connectivity support

- Flexible and resilient hybrid network that can work in both connected and disconnected environments
- A fine-grained quality-of-service abstraction for all applications, based on dynamic resource allocation

Trust-based networking

- Ensure adequate levels of motivation to engage in pervasive data sharing
- Aware of human behaviour

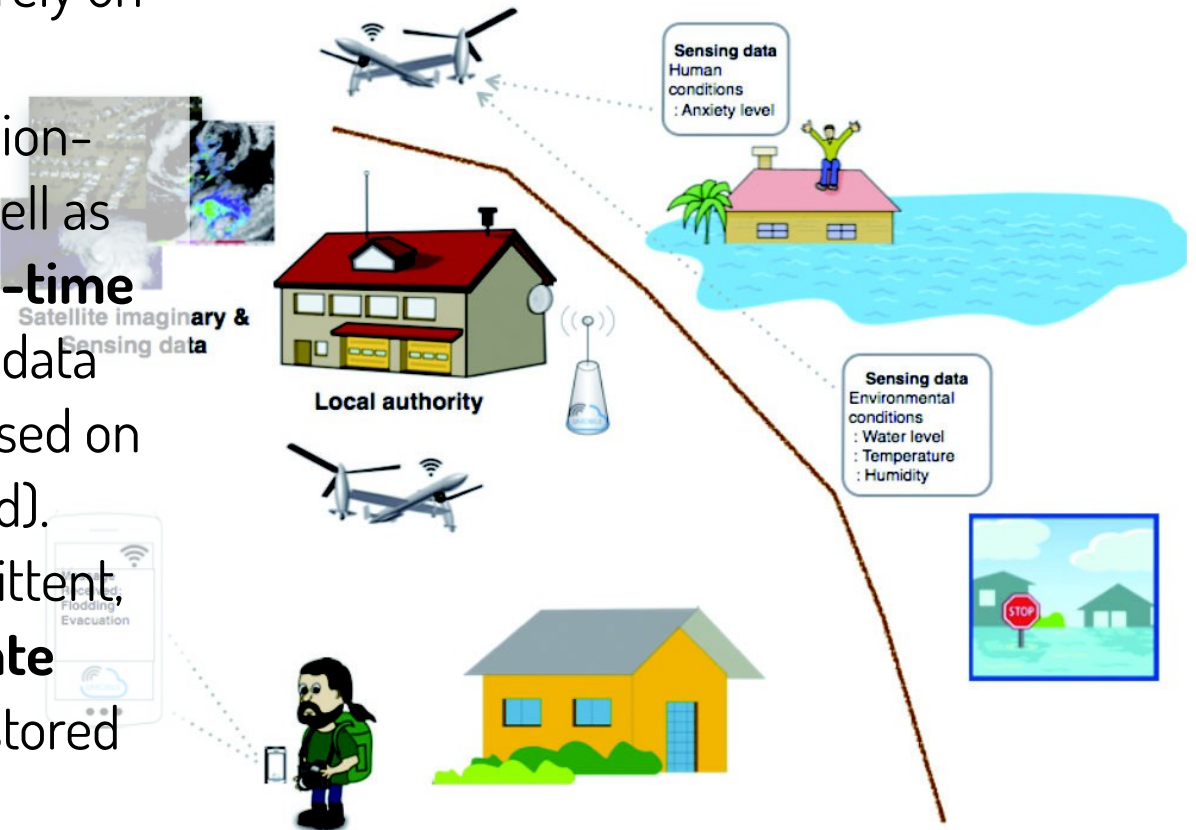




Applicability cases

Civil Protection

UMOBILE provides mechanisms that assist **responsible authorities** in the case of challenged events. Local authorities rely on **urban dynamics and social event monitoring** to provide data for decision-making. Situational information as well as decisions taken are **available in real-time in areas that may be affected** (e.g. data dissemination may be configured based on the geographic spreading of the flood). Where Internet connection is intermittent, the UMOBILE architecture can **migrate services** from the authorities to be stored at the gateway of the target areas.



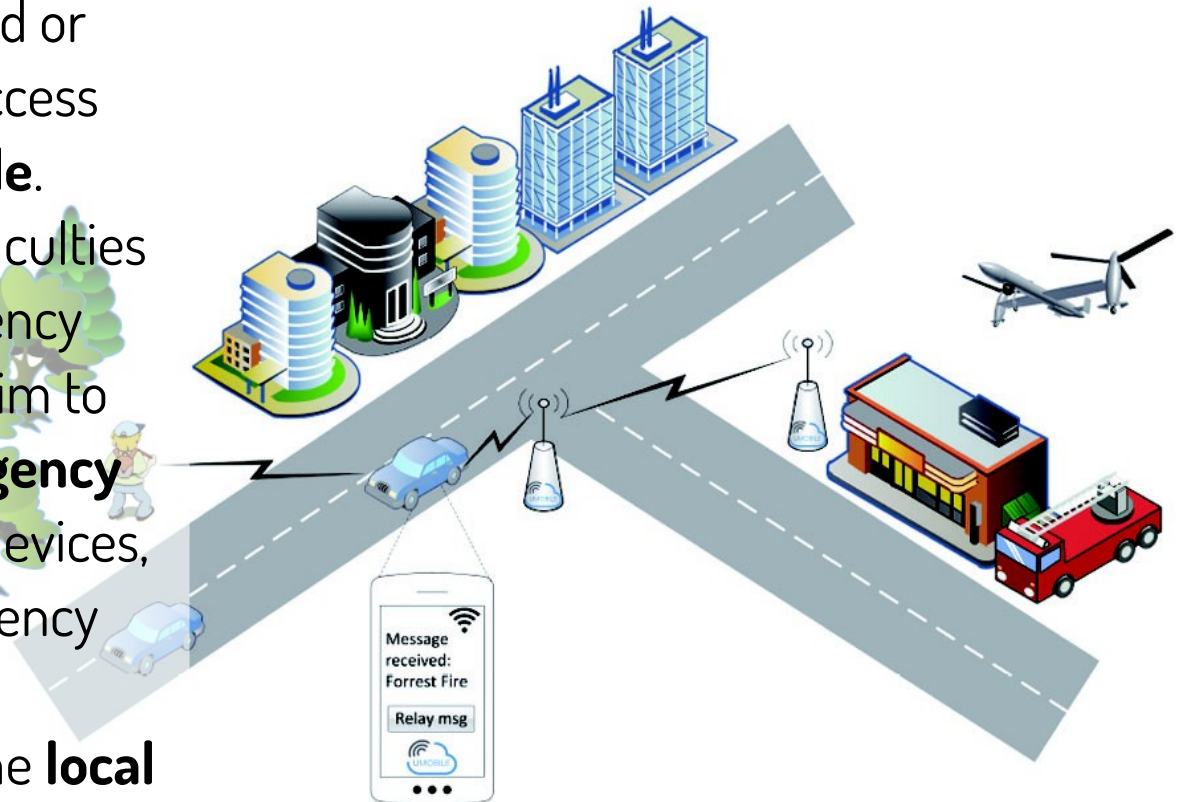


Applicability cases

Emergency Situation

In emergency situations, traditional communication services such as fixed or mobile network and local Internet access are **completely/partially inoperable**.

People involved may experience difficulties in receiving and dealing with emergency information. The UMOBILE systems aim to assist users in **disseminating emergency information directly** via end-user devices, UMOBILE hotspots and UAVs. Emergency information can be shared among **UMOBILE users** and forwarded to the **local authorities** (e.g., fireman, rescue teams).





CERCHIAMO AMMINISTRAZIONI !

UMOBILE Consortium sta esaminando collaborazioni con Pubbliche Amministrazioni italiane per l'attuazione di progetti pilota dimostrativi, senza costi per l'Ente.

Segnala la tua disponibilità al desk.

GRAZIE