Social networking has been a growing trend among people. People can stay connected to friends and other people that have same interests. Social networking sites (Facebook, Hi5, LinkedIn, MySpace) have gained popularity among internet users during the past few years. This motivated us to include interest-based communication as part of the mobile environment and automating the group formation for the ease of use.

**Mobile Environment**

- An environment essential for mobile communications where the portable wireless devices access data and information services.
- Services are more and more offered by the peer devices instead of servers in the Internet.
- People use various devices with various networking technologies.

**PeerHood middleware**

The PeerHood middleware is software for proactive management, i.e. discovery, monitoring and maintenance, of the mobile environment. The main software components of PeerHood are the PeerHood daemon, library and network plug-ins. The PeerHood daemon component uses different network plug-ins to proactively search for remote devices and their services. Applications can utilize this service discovery, as well as connection management, through PeerHood library interface.

- Network management middleware that works as a personal area network for trusted personal devices.
- Provides a communication environment for mobile devices to act as peers and communicate with each other directly without any centralized servers.
- Includes an application interface, offered by the PeerHood library, that:
  - Enables the usage of Bluetooth, WLAN and GPRS networking technology through a unified interface.
  - Hides the underlying networking structure from the application point of view.

**Social networking on Mobile Environment**

By social networking on mobile environment, we mean ad hoc communication enhanced with themes included from the social networking sites, such as interest-based communication, online profiles and friends lists.

**Conclusion**

- We studied a mobile environment and its requirements for the development of middleware in the context of social networking.
- Social networking in mobile environment on top of PeerHood was implemented.
- Dynamic group discovery was realized through practical reference implementation.

**Future Work:**

- Teaching semantics to the environment
- Performance testing of the dynamic group discovery
- Analyze the efficiency of such dynamic group discovery in any overlay networks.