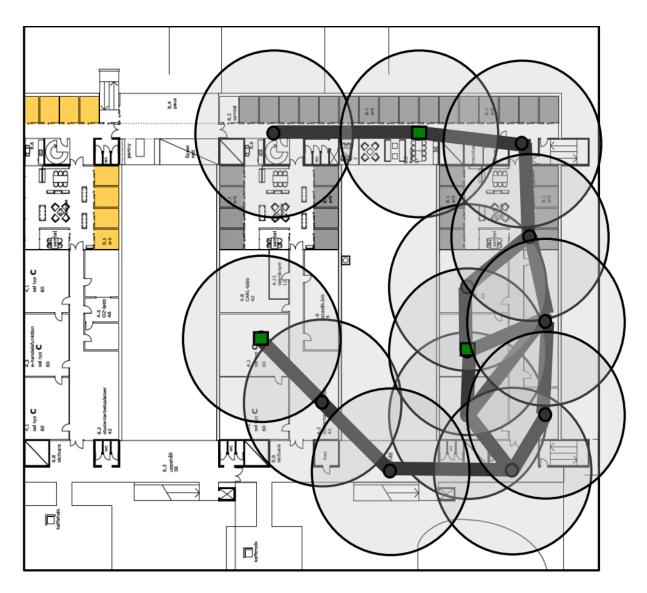


KAUMesh - E-CLIC LivingLab Värmland

The LivingLab of the Karlstad University in Värmland, Sweden is called KAUMesh.

KAUMesh is an experimental Wireless Broadband Mesh Network based on 802.11a/b/g WLAN based devices (the mesh node) that have been deployed at the Karlstad University Campus. KAUMesh comprises currently 20 mesh nodes, which are permanently installed to cover large areas inside the House 21. Researchers and students from Karlstad University and partner organisations use KAUMesh to develop and evaluate next-generation WLAN and Wireless Mesh solutions.



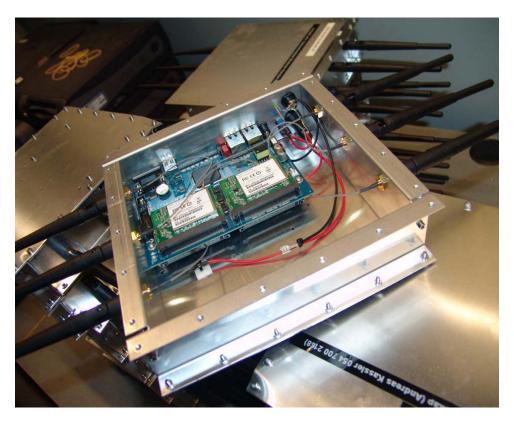
Picture 1: Mesh network of one floor of house 21 at the Karlstads University



Currently the KAUMesh testbed provides the following features:

- 3 IEEE 802.11a/b/g wireless cards per node
- Each node has an Ethernet connection for control and logging
- Remote reset of nodes
- Integrated node reservation and access control system
- Graphical monitoring tools
- A wide range of routing protocols and traffic generators

KAUMesh offers a flexible architecture, both in terms of hardware and software. The deployment allows a quick re-arrangement of the mesh nodes. Users can control almost all aspects of the KAUMesh software (including the OS-kernel) remotely.



Picture 2: Mesh node - multiradio node including Cambria Platform GW2358-4 and three Atheros-based 802.11a/b/g NIC

For monitoring and control purposes each mesh node has a wired Ethernet connection to a managed network in order to send monitoring data to a monitoring server, located in the fixed network. The monitoring server also for hosts configuration information for the mesh nodes and provides software via TFTP and NFS.