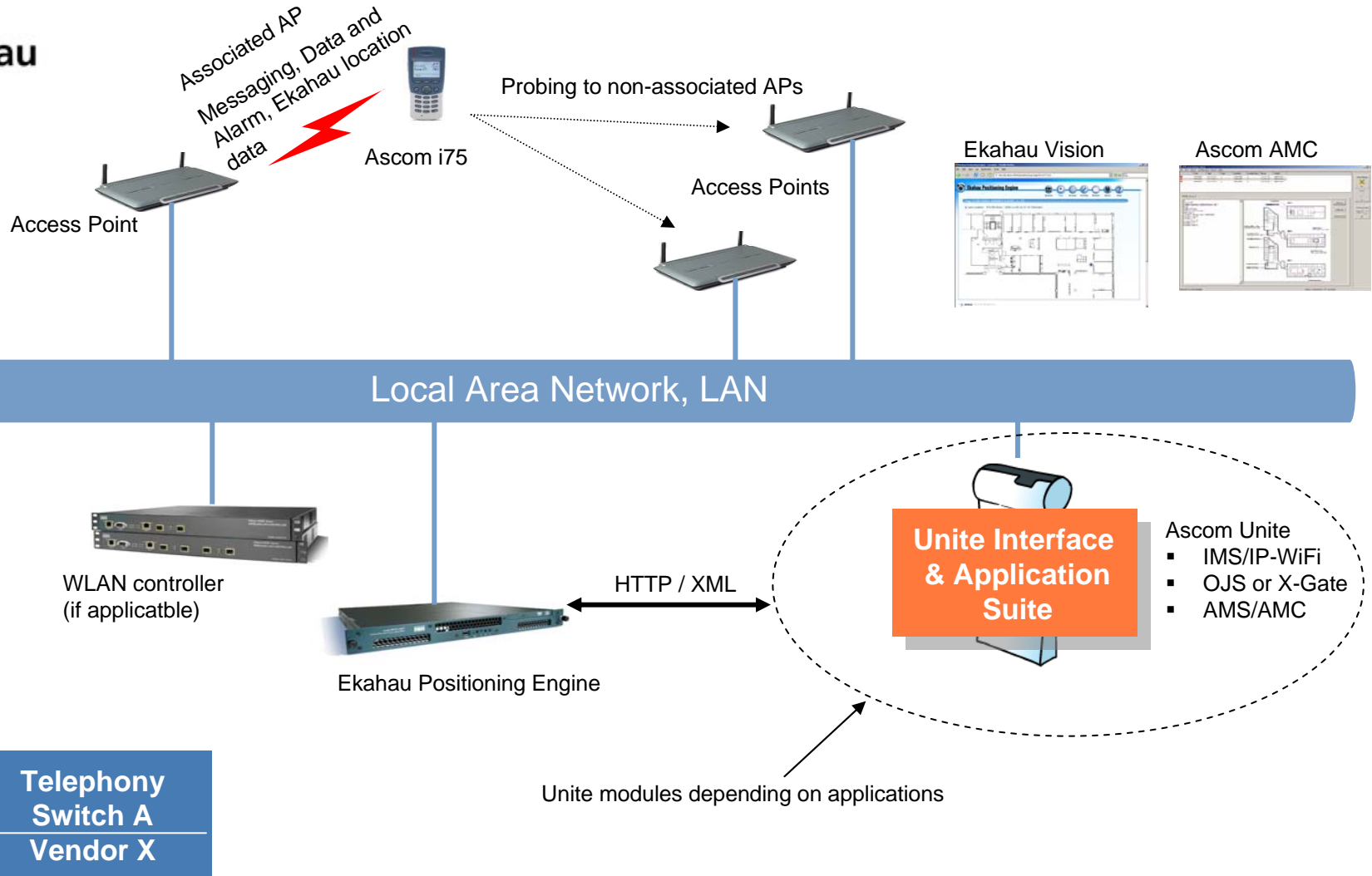
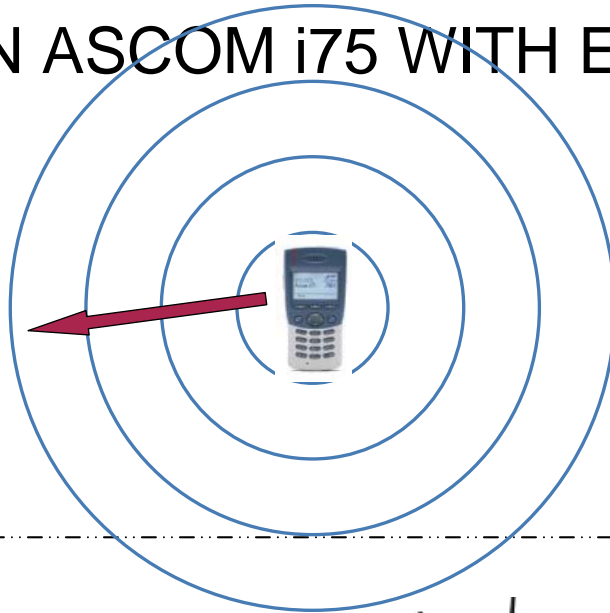


ASCOM VOWIFI WITH EKAHAU RTLS LOCATION SOFTWARE



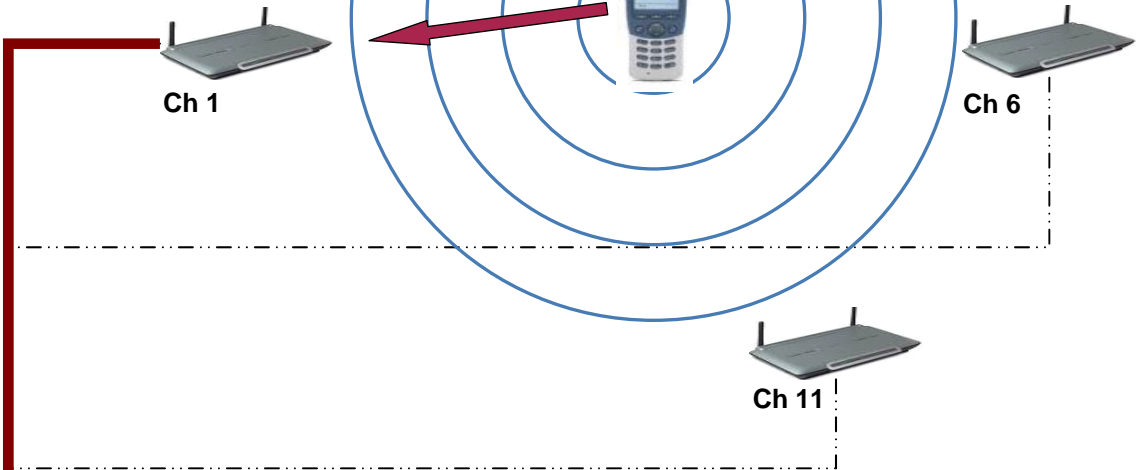
LOCATION OF AN ASCOM i75 WITH EKAHAU RTLS



1) The i75 scans the environment at defined operating channels (e.g. 1,6,11) at configurable intervals.

2) The i75 sends periodically ELP reports to the Ekahau Position Engine. The report contain access point ID and measured field strength of all detected APs.

3) The Ekahau Position Engine calculates the xyz-location of the device by using probabilistic location algorithms that relates the location to a pre-calibrated map.



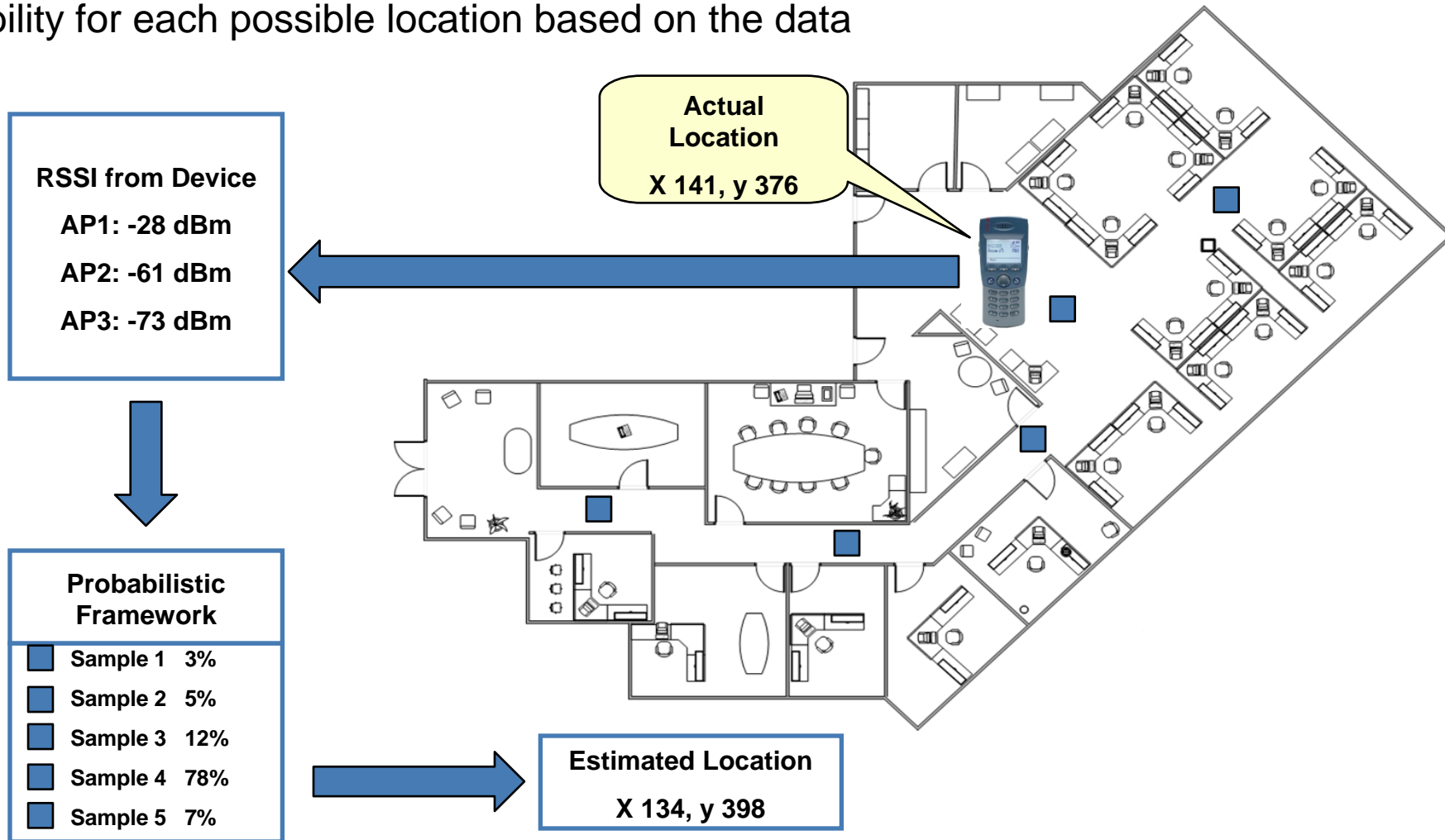
- Ekahau Positioning Engine (EPE)
- Ekahau Location Survey (ELS)

Ekahau Vision



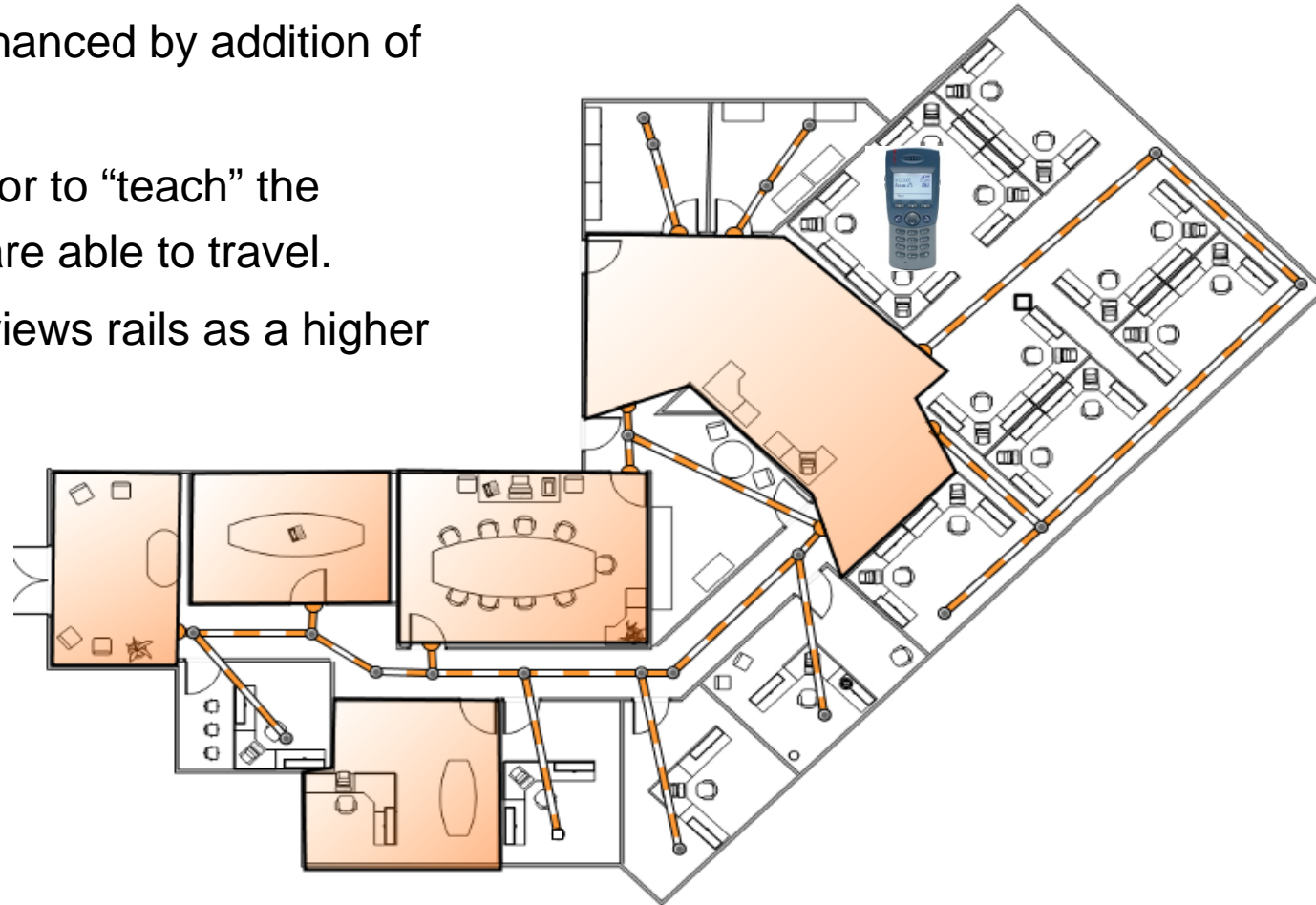
PROBABILISTIC FRAMEWORK

- Records observed client signal data and assigns a probability for each possible location based on the data



TRACKING RAILS AND OPEN SPACE

- Framework is further enhanced by addition of “rails” and “open space”
- Added by an administrator to “teach” the solution where devices are able to travel.
- Ekahau RTLS Solution views rails as a higher probability of location

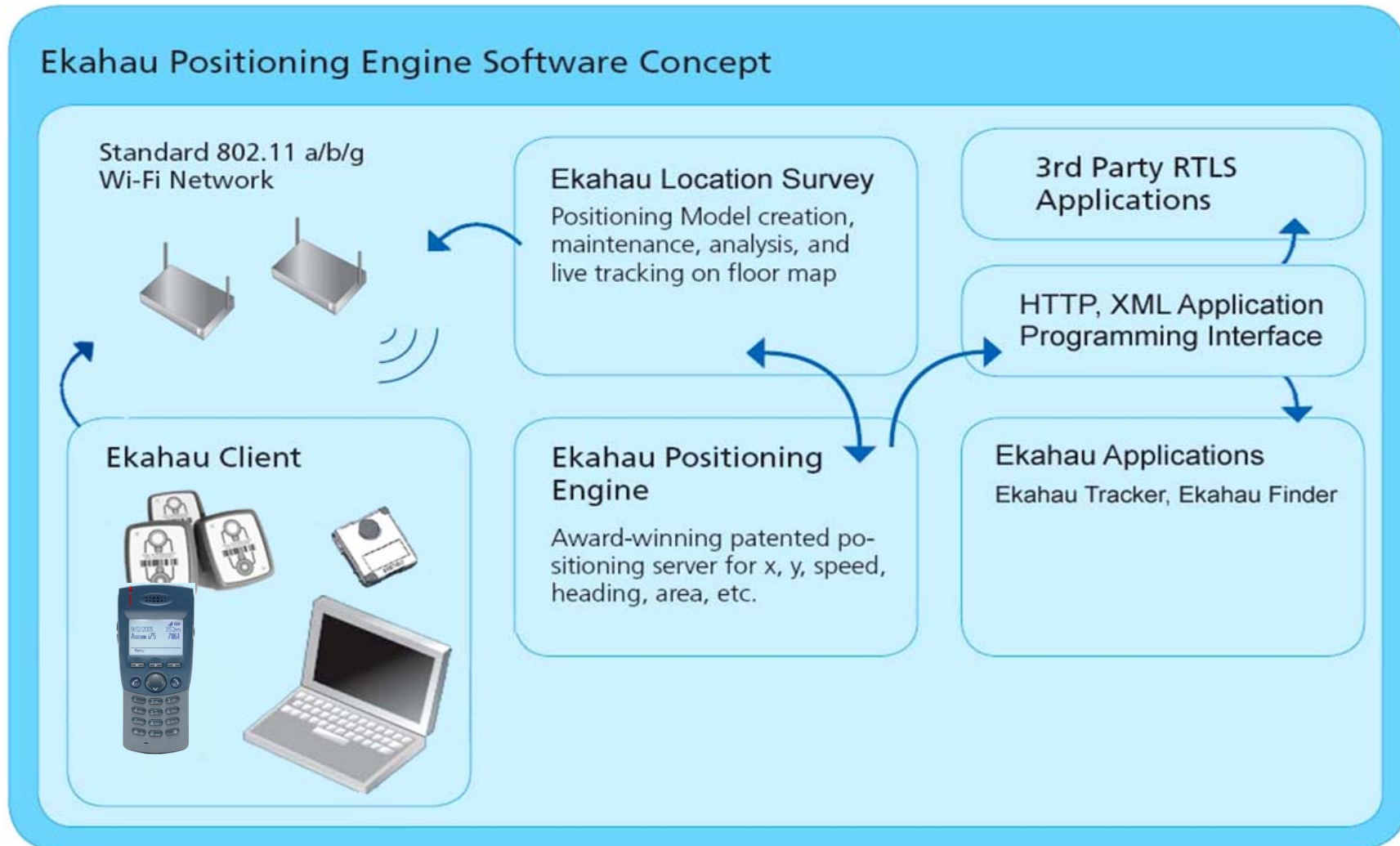


NORMALIZATION

- Different Wi-Fi devices will “see” the network differently due to RF performance differences
- Normalization files mitigate the differences between Wi-Fi devices through software conversion
- Ascom i75 normalization file is included by default as a supported normalized client.



EKAHAU RTLS SOFTWARE COMPONENT CONCEPT



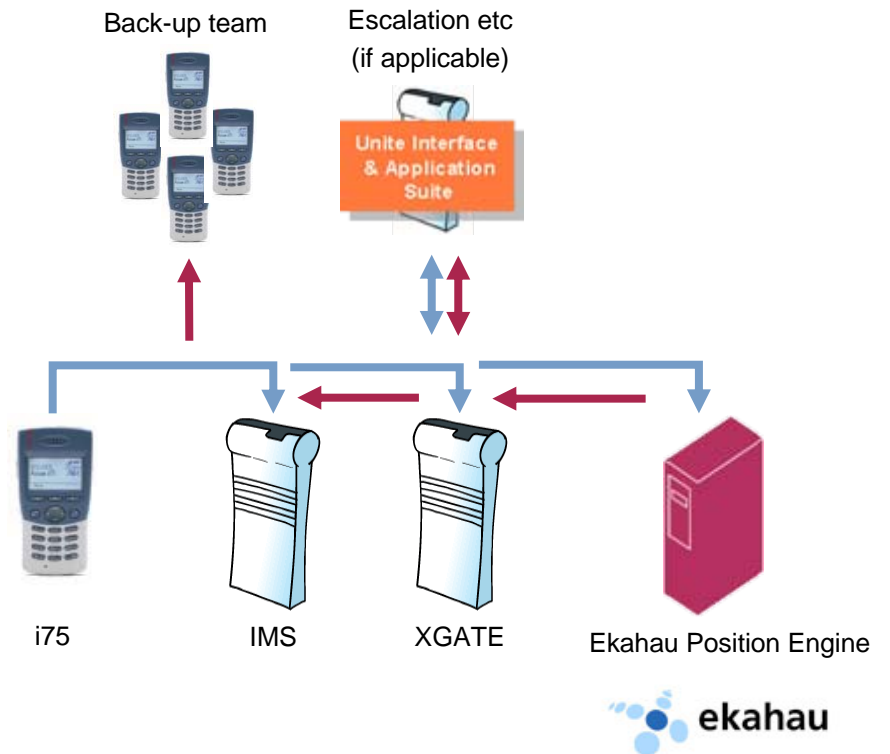
EKAHAU INTEGRATION WITH THE ASCOM XGATE

Benefits:

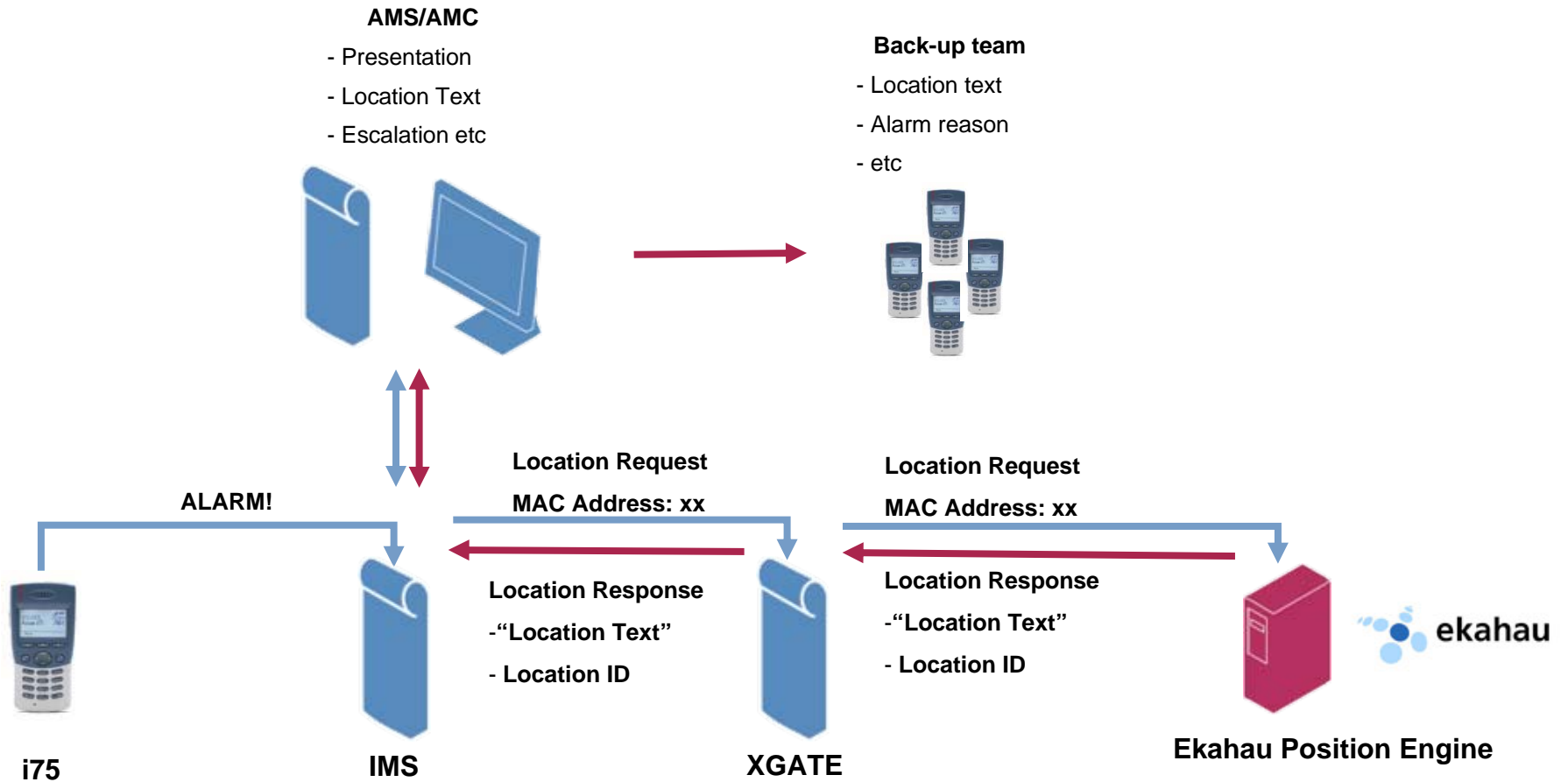
- Only a configuration in the XGATE, no software needs to be implemented
- Configuration can be extended with more location services by XGate programming
- Can be used with AMS/AMC

Limitations:

- A query of the position is made at single request for example by an alarm from handset.

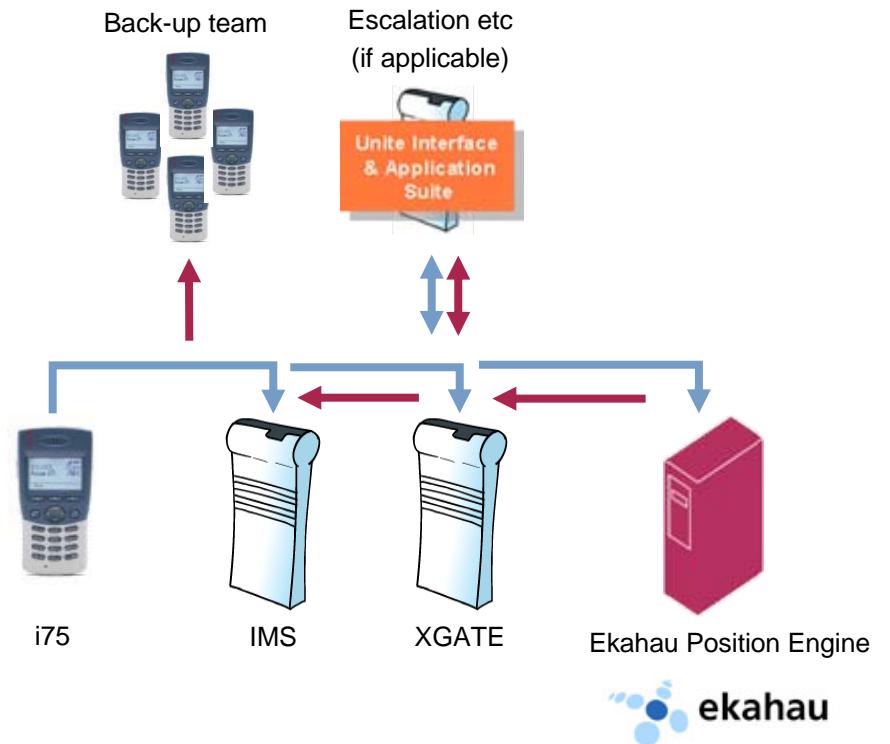


EKAHAU INTEGRATION – MESSAGE FLOW



BILL OF MATERIAL – ASCOM FIXED EQUIPMENT

- IMS-WiFi (IMS-M801)
- XGATE (XGATE-M1)
 - XGATE Ekahau configuration file
- Licenses needed:
 - XGATE-LPA
 - XGATE LA
 - XGATE-LPX
- AMS (AMS-M)
 - Licenses needed:
 - AMS-LA
 - AMC optional for Alarm management/presentation
 - AMS-LCA
- Software update (available) needed for IMS, XGATE and AMC



BILL OF MATERIAL – ASCOM HANDSETS

- Any type of Ascom i75 handset can used for Ekahau location tracking
 - i75 Protector
 - i75 Medic Protector
 - i75 Messenger (No alarm functions)

- The embedded Ekahau client is activated by a SW upgrade license (KATY-LLOC)





THANK YOU!

