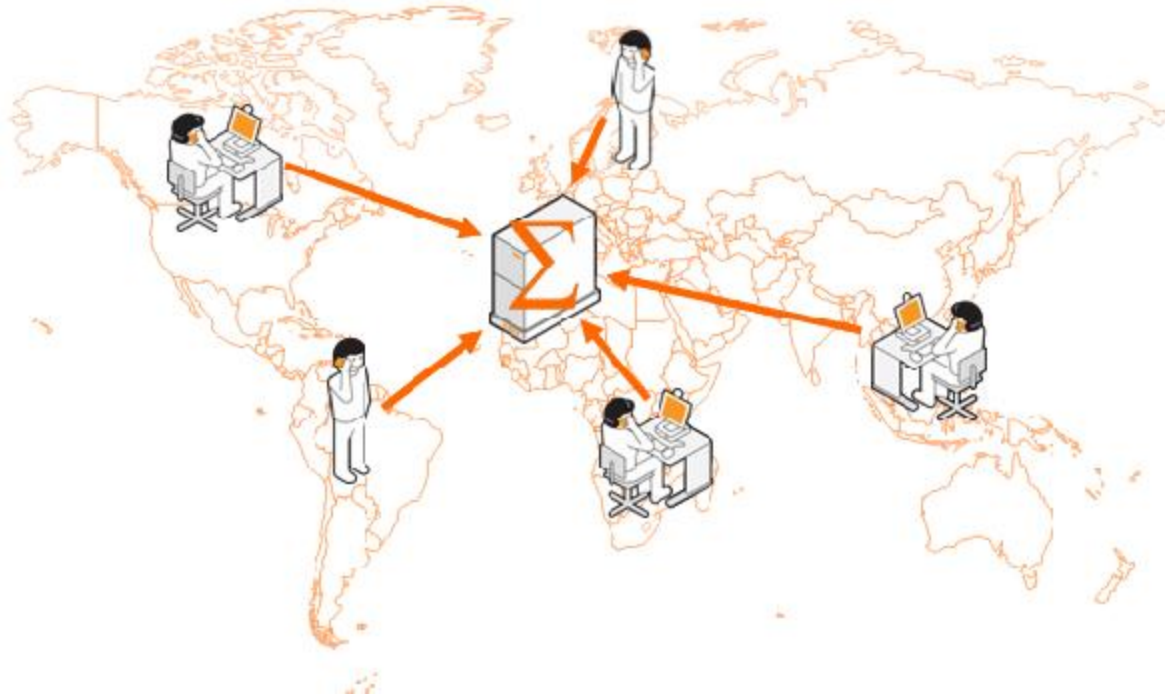


Audio Conference Communication System (ACCS)



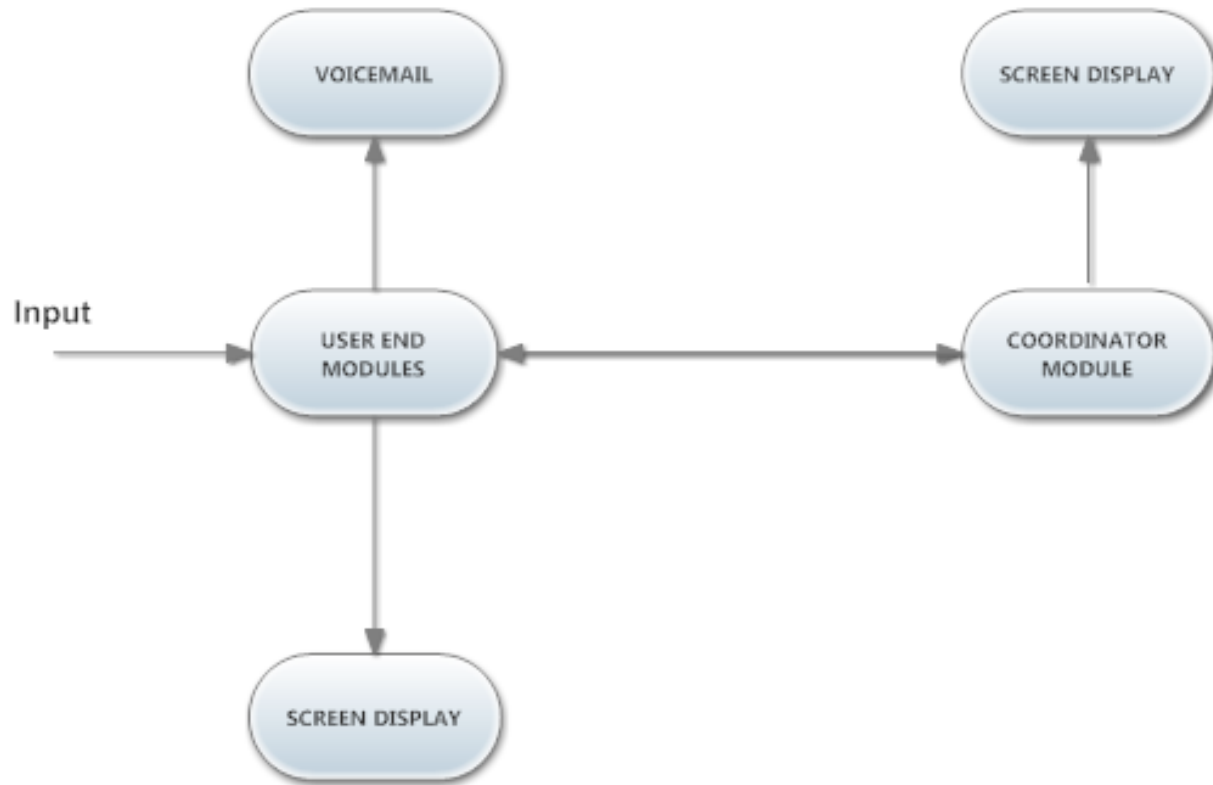
Why ACCS?

- Robust Communication
 - Independent of the Internet.
 - Independent of Phone Network.
- Single Communication Channel and Minimum Wiring
 - Implementation of TDMA at a coordinator base

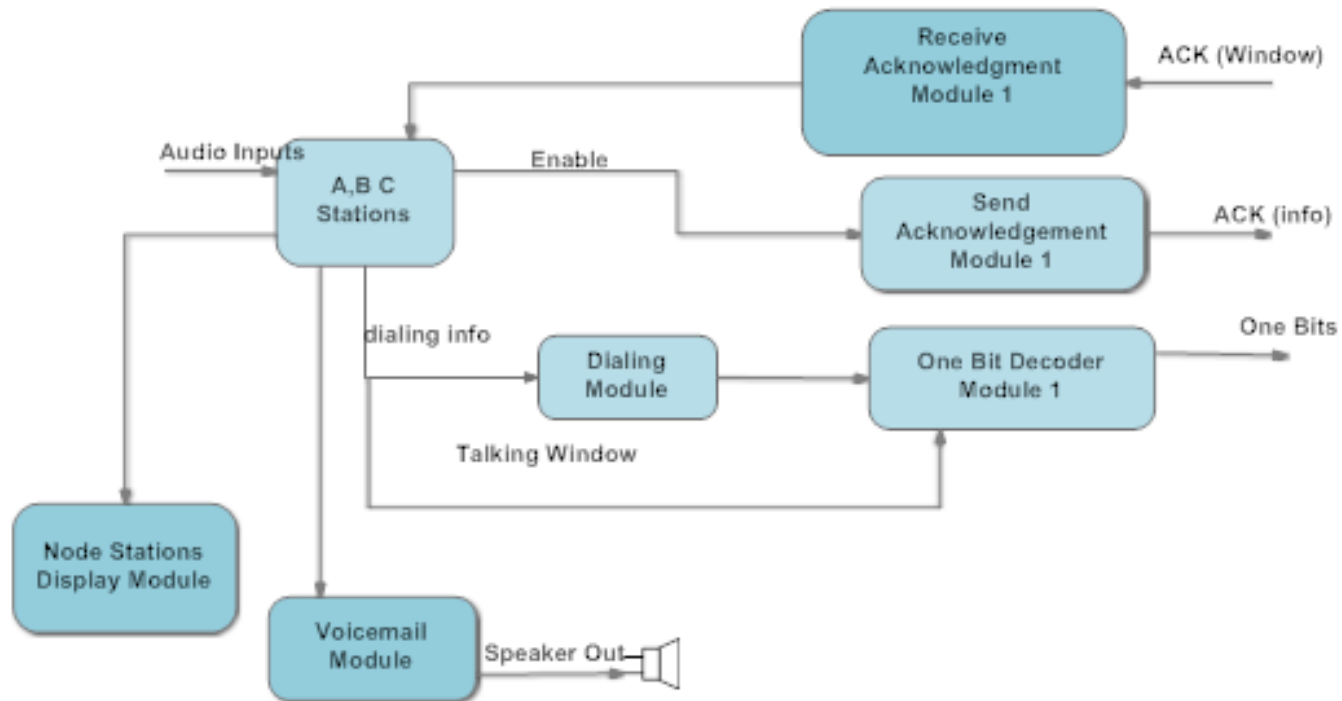
Features

- Conference Calling.
- Call or Add new individual during an ongoing conversation.
- Record/ Listen to voicemail – saved on Flash ROM.
- Display system state on coordinator monitor. (active conversations)
- Display state on individual station monitors. (busy, available, calling, recording voicemail ...etc)

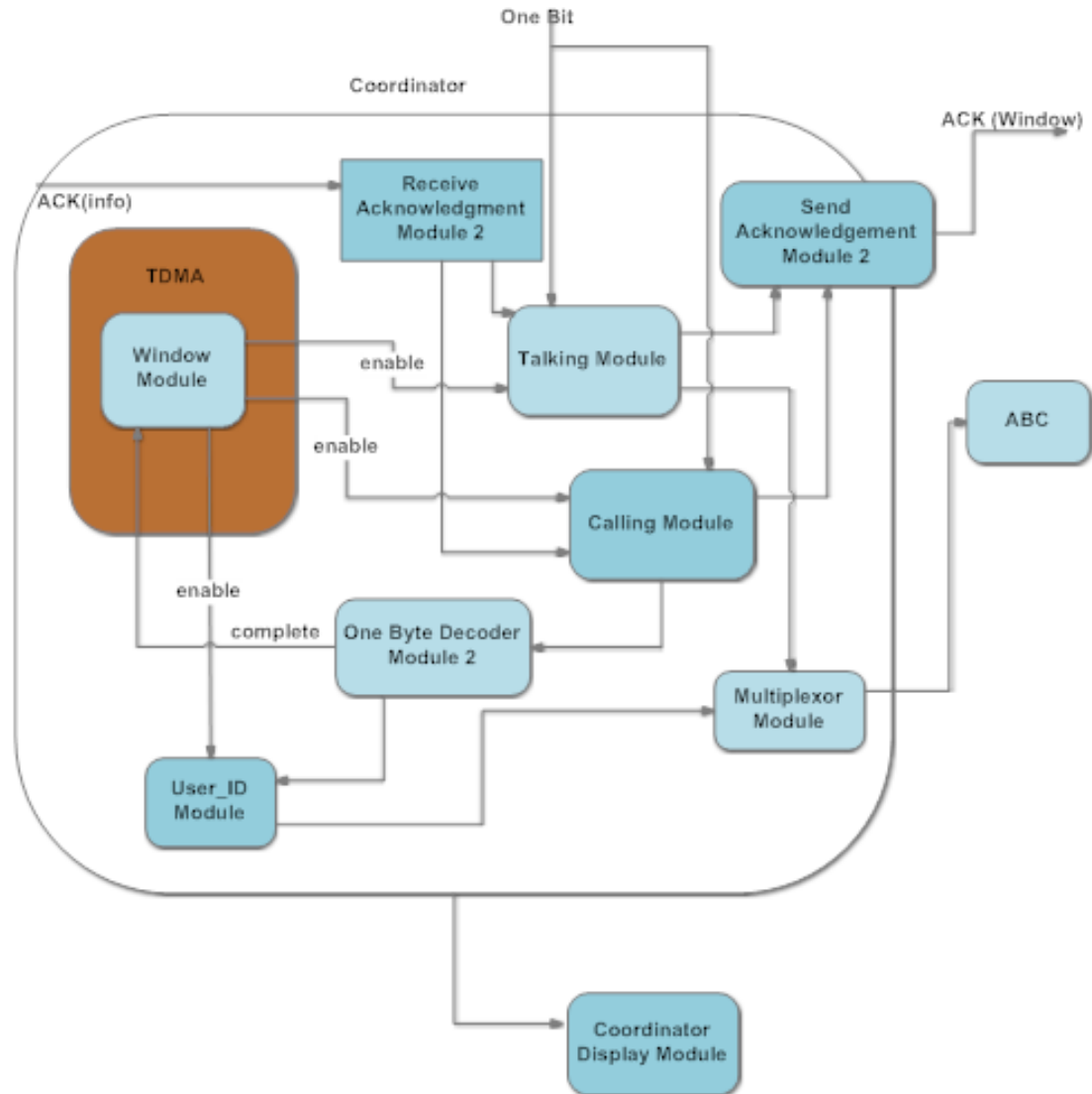
Overall System



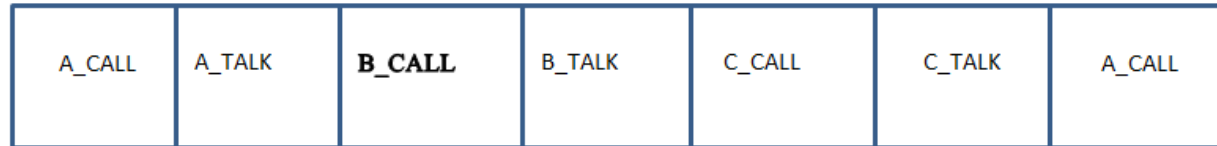
User-End Implementation



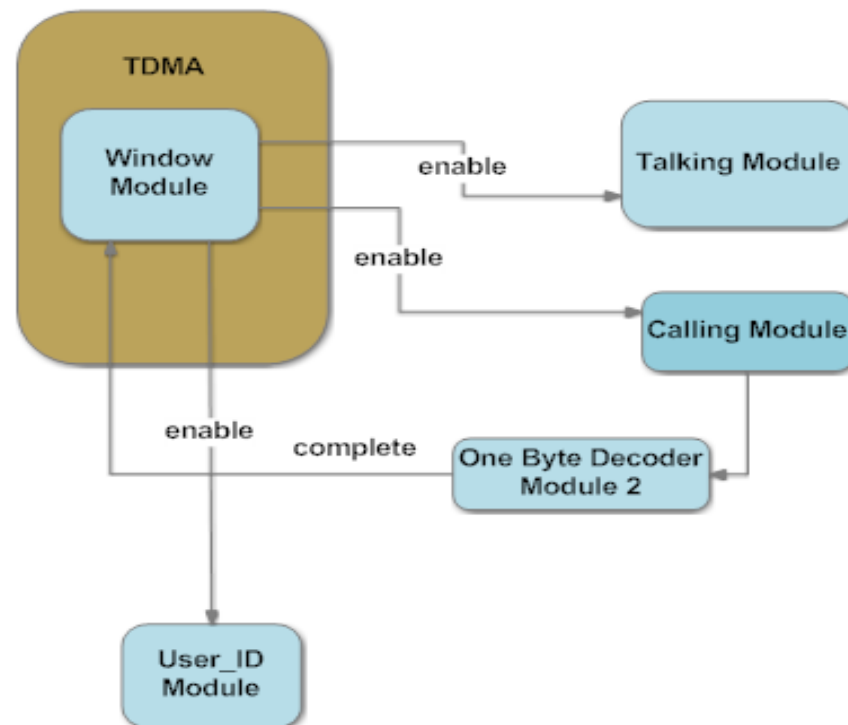
Coordinator Module



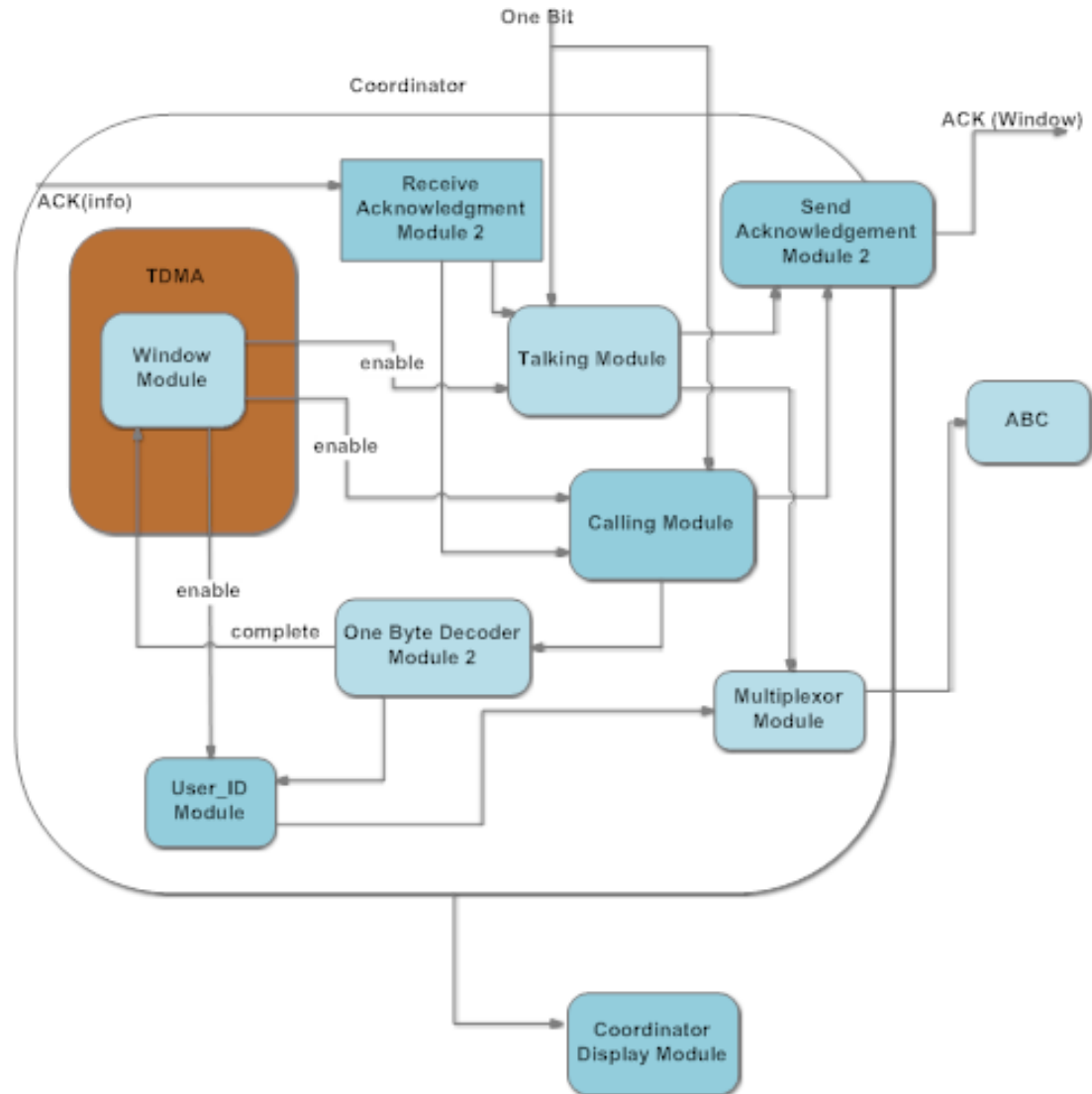
Coordinator- TDMA



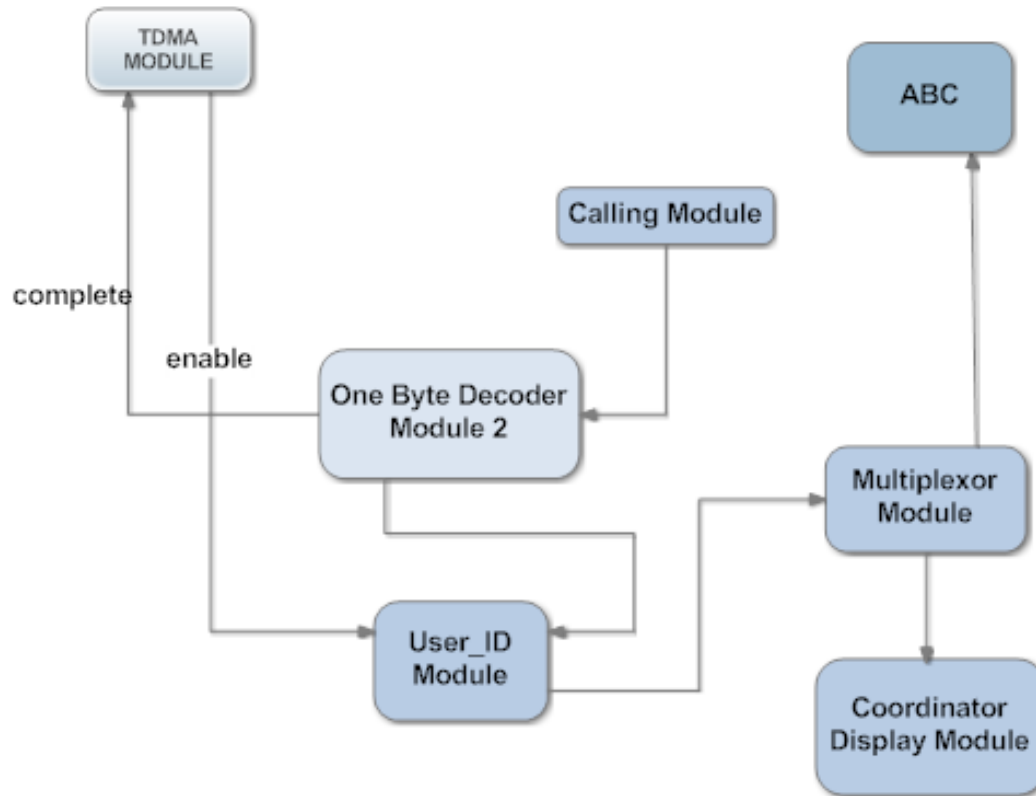
TDMA- Sliding window



Coordinator Module



Coordinator and Display



Data rate and acknowledgement

Data rate calculation:

Data rate of
sampled audio

→ $6k * 2 * (6*2 + 8) * N \text{ of stations} < 1 \text{ M}$



Two windows



Two ack
each window



Useful data



Max frequency of
FPGA

Acknowledgement :

It is chosen to be 011110.

Timeline

- We have already implemented most of our modules
- Modules integration and testing -----Week of 11/12
- Display Modules and voice mail-----Week of 11/21
- Adding more features i.e wireless and video---Week of 12/01