## UML for Observable/Observer for Message Qing Lyu, Zhen Cheng



update(actionType: String, message: Message):
void

## SendMsgListener

- mm: MessageManager

+ update(actionType: String, message: Message): void

## MessagePublisher

- listeners: HashMap<String, ArrayList<MessageListener>>

- + MessagePublisher(operations: ArrayList<String>)
- + subscribe(eventType: String, listener: MessageListener): void
- + notify(actionType: String, message: Message): void

## MessageSender

+ events: MessagePublisher

- + MessageSender(operations: ArrayList<String>)
- + sendMsg(actionType: String, message: Message): void