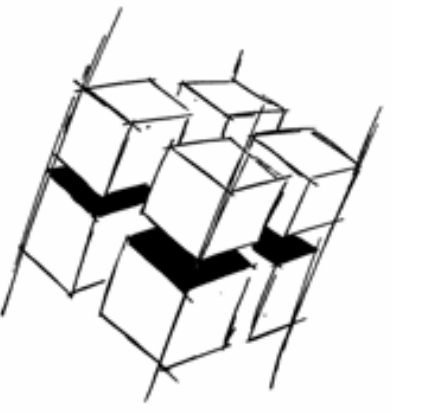




Dynamic Voice Communication Support for Multiplayer Online Games



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I. Dynamic Voice Communication in Groups

Issue

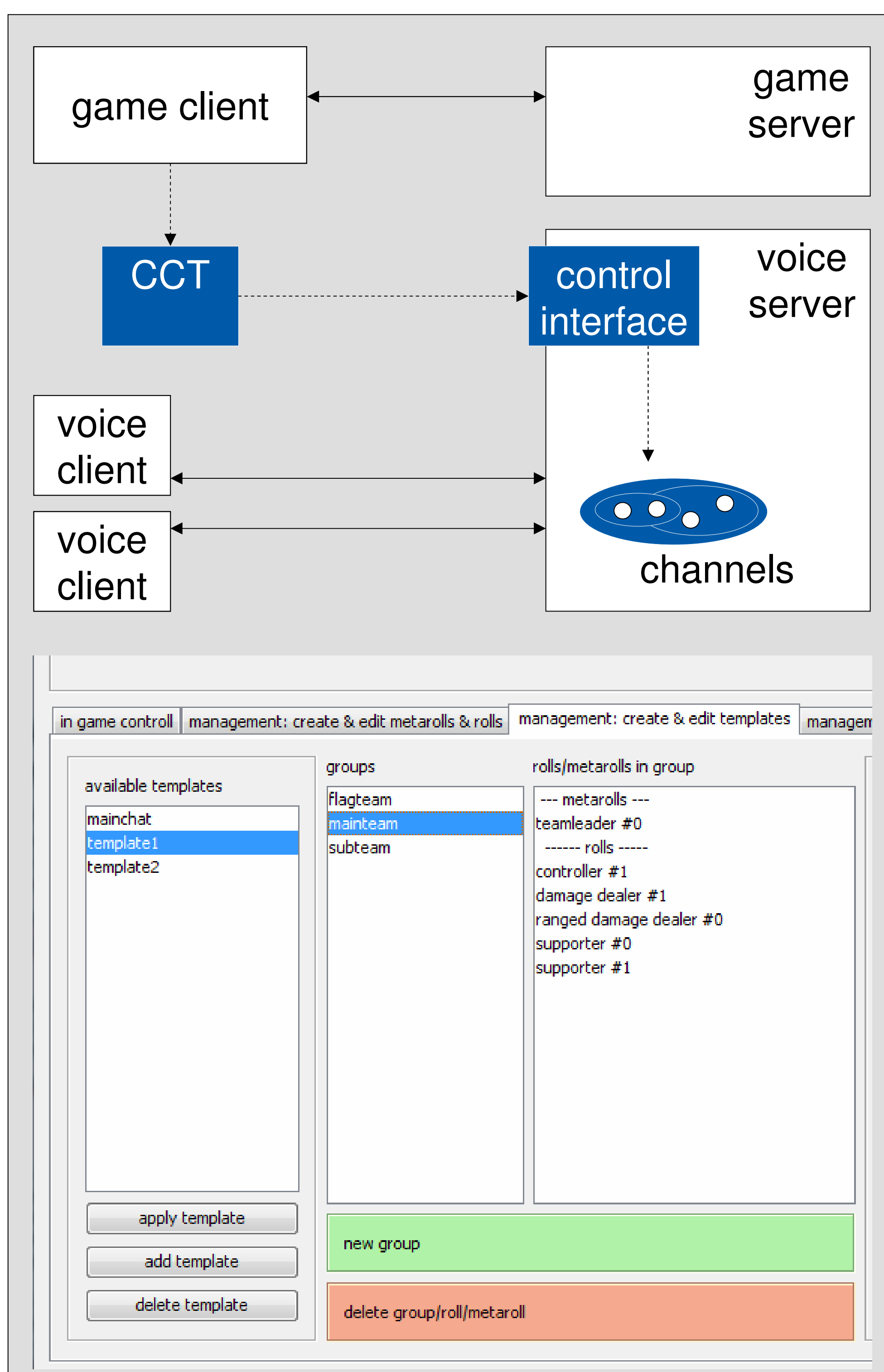
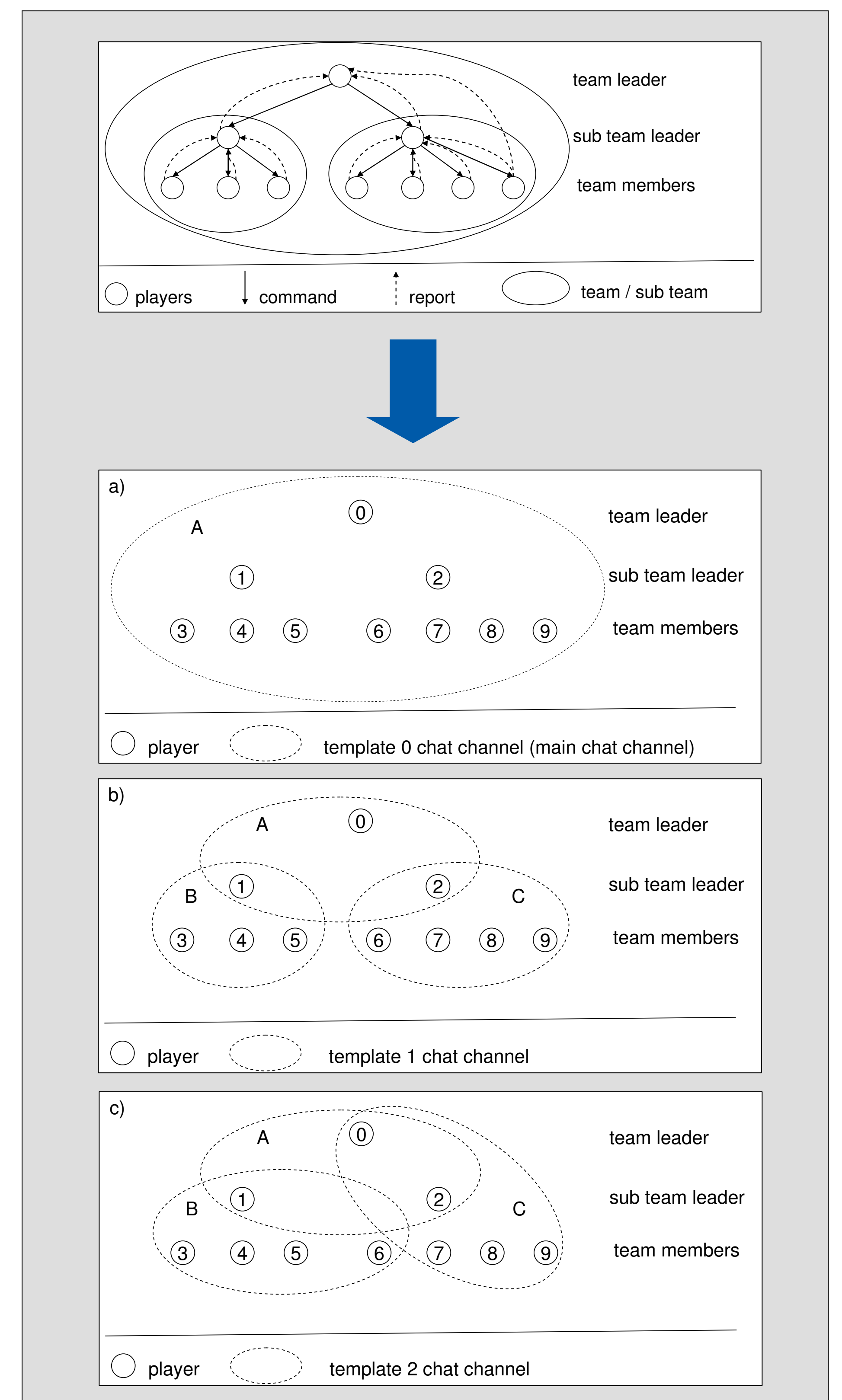
- Team play is the main incentive for players of Multiplayer Online Games
- Static chat rooms do not satisfy the needs of tactical team play

Goals

- Assignment of players to groups should be adaptive to the game situation
- Support efficient group communication using dynamic group partitioning

II. Roles, Groups and Template Planning

- Roles are essential for the organisation of team play within groups
- Character roles depend on character class and duties and responsibilities
 - E.g. short range / long range damage dealer, controller, supporter
- Metaroles and command structure are game independent
 - E.g. team leader, reporter
- Groups are defined by strategies and tasks to fulfill certain goals
- Planning templates for group assignment
 1. Assignment of meta roles and character roles to the team members
 2. Definition of occurring game situations → situation templates
 3. Group partitioning for different game situations



III. Communication Configuration Tool CCT.KOM

- Adding dynamic support for a hierarchy of members
- Creation of voice communication channels on the fly
- Fast access to group assignments using keyboard shortcuts or ingame information
 - Template switching
 - Direct player communication (only for small groups)
- Allows team leader to mute all other speaker to issue important instructions
- Interface to the game client for information exchange and ingame control
- Using mumble as a gaming open source voice communication tool [<http://mumble.sourceforge.net>]

IV. Future Work

- Integrate CCT.KOM into a Multiplayer Online Game
- Utilize ingame information for automatic control of dynamic voice communication
 - Situation based template switching
 - Auto assignment of players to chat rooms depending on their virtual situation (e.g. location based)