

**Systemic Improvisation** refers to a class of musical improvisation systems, wherein virtual interacting agents transform the musical interactions between players. It is a new kind of musical interaction/situation/work, and a continuation of Dahlstedt's and Nilsson's long-term research into technology-mediated musical creativity and performance. The concept emerged from a previous research project, Creative Performance, which had a broader scope, investigating different categories of technologies that augmented and enabled musical performers to play in ways not previously possible. What we call systemic improvisation emerged as the most promising and interesting paths to follow in our continuing work, not least thanks to the very positive response from the participating musicians and the interesting musical results. In this project, we define an improvisation system as a system designed by someone, with a specific configuration of human agents (musicians) and virtual agents (interactive processes), and with communication going among all these agents, virtual and human. *Systemic Improvisation* is the activity of a number of musicians playing in such a system. It is also the term we have chosen for the whole category of musical works—a genre, if you wish. These improvisation systems work with all kinds of instruments, and the normal sound from the instrument is always heard acoustically, as in normal playing—it is not processed or hidden.

In this particular performance the researchers/improvisors are exploring two improvisation systems:

- 1) A color-coded sign system where the players have a computer pad each, and a total of four colors control players relations and behavior. Before starting, the participant players have to negotiate the interpretation of the signs. E.g. in one interpretation red = lead, blue = support, blue = opposition, and grey = silent. Then it is up to each player to interpret the given sign in turn. In addition to follow instructions, participants are obliged to feed in future configurations into the system. Which means that the players have two tasks to fulfill, acting according to present sign, and feeding in new configurations.
- 2) Dice games. A number of dice types is used in similar ways as above: color coded dice, fudge dice that contains blank, + and – and others. A session starts with a negotiation of the interpretation of signs on the dice. Then, a number of rules has to be terminated about game procedures, e.g. as soon as one player raise his/her arm, all players have to role a dice, if one player is pointing at another player, or herself, this player has to role its dice.

The musical outcome of such systems is quite different from playing without them, which is quite obvious for listeners as well as players involved. The players/researchers in the attached videos are from left: Palle Dahlstedt, Tim Perkis, Per Anders Nilsson, Gino Ropair.