Position Statement

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In recent years, a lot of multimedia synchronization techniques have been proposed for a big variety of application scenarios and systems. Some people believe that there is no more work in this research field, but I believe that it is not a dead field.

My research has been oriented to study temporal models and temporal specification schemes for the definition and acomplishment of multimedia synchronization in distributed systems. As a result of this research, I have proposed a temporal reference framework as a unification theory for multimedia synchronization. The proposed temporal reference framework helps to understand better (from a unified perspective), what synchronization is and how it can be defined. It also helps to evaluate and compare techniques (and temporal specification schemes) in an orthogonal way.

But the synchronization field is missing a complete unification, not only from the models of time point of view, but from the "realization" of the distributed system perspective. A lot of work is still to be done to integrate the efforts of the various research fields: communication, databases, authoring, and operating systems. We should try to pursue this objective.

Concerning future research synchronization issues, besides the one I just pointed out, I think that the expert panels of the workshop are key discussion for future work:

- "Reuse of technology": although the synchronization research community has proposed a lot of solutions, no one has been proved to be the most appropriate one for a particular (or general) multimedia scenario(s).
- "QoS": QoS at the user level is a very recent topic of study. The definition of human perception models of quality (for synchronization) is a very interesting research, and the challenge is to transform those "quality models" into QoS parameters of the distributed system.
- Finally, new interactives schemes and mechanisms for distributed systems are to be proposed as we still can think of new interactive applications and system configurations.