Report of the Technical Committee on Computational Kinematics February 16, 2004

1 Introduction

Computational kinematics (CK) is a domain which is slowly spreading in the mechanism community. We understand here under the term CK that branch of kinematics research involving intensive computation not only of the numerical type, but also of a symbolic or geometric nature. The TC on Computational Kinematics has now 16 members.

2 Events of 2003/2004

One of the main workshop organized by the TC is the CK conference that should have been held during the World Congress in the PRC. The positive point is that a large number of papers (over 50) have been accepted. But clearly the postponement of the World Congress will complicate the task of the committee.

Hence the TC has focused this year on the preparation of the next workshops:

- ARK, to be held in Genova in 2004
- CK 2005, to be held in Cassino in 2005. It has indeed be decided that in spite of the postponement of the World Congress the schedule of CK will not be modified so that CK will be held in alternance with ARK. A special issue of MMT with selected papers of this conference is scheduled.

2.1 Electronic Journal of Computational Kinematics

This is a recurrent problem for the TC. There is a strong trend in many different scientific domains to "go electronic" and this trend has grown recently. This may be explained by the very large increase in the subscription rate of most journals that cannot be easily justified together with a growing feeling that on-line, free access to scientific knowledge should be enforced.

Unfortunately it cannot be said that the mechanical engineering is a leader of this trend. Together with problems due to the way the academic system is working in our field may explain why we have not succeeded in launching EJCK.

The TC has hence decided to put EJCK in a stand-by mode: the journal site is still active and the first issue is available but no paper submission is accepted. But we are still discussing the possibilities to relive EJCK. One possibility suggested by an external member (V. Parenti-Castelli) is to use EJCK as an archival site for teaching materials (or, as suggested by M. Shoham, to start with a new journal entirely devoted to education that may be named ECK (Educational Computational Kinematics)). This solution has various advantages:

- having a large number of teaching documents located on a unique site will be very useful for the community
- a large number of such documents can be collected very quickly among senior members

• if EJCK was mainly devoted to this task in an intermediate phase it may be thought that the journal will become quite popular among the community, especially among young researchers. If the community at large is accustomed to consult and to contribute to EJCK we may expect a smooth transition toward a journal that will offer both teaching and scientific documents

The main drawback of this approach is that EJCK will have a reputation of "teaching only" journal that does not offer a significant impact in term of recognition for individuals.