The real challenge of e-Learning is to produce content that brings a general improvement in the way students learn and instructors teach. The design and the production of high-quality digital content has turned out to be harder than expected, the main reason being that it requires expertise in several subject areas and in several technologies. In the case of mathematics, the required areas of expertise include that of professional mathematicians, software engineers, publishers, and perhaps learning theorists.

Many people are working in these areas with duplication and reinvention. However, there is a critical mass of activity around some areas, such as the semantic markup for mathematics which is directly related to enhancing digital content. Much of this activity is or has been sponsored by the EU or at a local level, such as the UK Serving Mathematics project [1]. There are many multi-national consortia, e.g. (W3C’s MathML Interest Group, OpenMath Society), and some private companies.

One of the next challenges for the e-learning community is how to maintain and to enhance the quality of digital content. There are several reasons why it is still very hard to produce quality digital material.

- editing formulae is hard, editing semantic markup is even harder;
- authors tend to stick to the tools they have used until today;
- authors do not realize the full potential of semantic markup; and,
- technology developers are not aware of learning objectives of authors and/or users of digital learning resources.

The goal of the JEM thematic network is to pool together expertise in education mathematics across the EU. The main focus of the JEM network is to bring together the authors of digital content used for e-learning in mathematics with the groups that are actively developing semantic web technologies and tools for the representation of mathematical content. The major work of the network is to establish the appropriate way in which these two communities can interact and cross fertilize.

With 15 founding institutions, almost 200 members and growing numbers of publications, case studies and learning resources, the JEM network aims to contribute to the coordination of content enrichment activities in the area of mathematics, particularly in the e-learning platforms operated by the partners. The network also organizes events at which members can share their experiences, expertise, discuss ideas and plan future collaborative activities. In many ways, this thematic network parallels the work of our UK MSOR Network, albeit in more specialized areas of online learning.

For more information, join online at http://www.jem-thematic.net/

References