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After Three Decades of Medical Informatics Europe Congresses*

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Abstract. European medical informatics professionals traditionally gather at congresses of the European Federation for Medical Informatics (EFMI) named "Medical Informatics Europe – MIE". After more than three decades of successive organization of these congresses, some important points of their history of are presented. As the MIE Congress in Sarajevo, organized by the Society for Medical Informatics of Bosnia and Herzegovina (BHSMI), is the third EFMI event in the western part of South-East Europe, a short review of the development of medical informatics in this part of Europe, together with important events in its history, will shortly be presented.

Keywords. EFMI, MIE congresses, MIE history, medical informatics history

First MIE congresses have been organized at the end of a period of forming various working groups and associations of people engaged in developing computer applications in medicine and health care, as well as researchers studying the theoretical and practical aspects of the new emerging field – medical informatics. First international impetus came from the International Federation for Information Processing (IFIP), an organization formed under the patronage of UNESCO, who developed its activities through so-called technical committees (TC). In 1967 François Grémy from France initiated the IFIP-TC4, a first forum which started to gather medical informaticians, especially those from Europe, and provoked organization of national MI societies. As IFIP itself was formed as a federation of national societies, thus reflecting the spirit of international cooperation of nations all over the world in education, science and culture, this federative thinking was transplanted also to its TCs. Grémy, becoming the first chairman of IFIP-TC4, found quickly a supporter of such development in the person of Peter L. Reichertz from Germany, who started in the seventies of past century a series of medical informatics conferences in Hanover. Both Grémy and Reichertz deserve credit for the spread of the term "medical informatics" all over the world – Grémy was the first to add the adjective "medical" to the new term "informatics" (attributed to Philippe Dreyfus, director of the National Center of Electronic Computing of the Bull Co.; in the literature it is noted that this happened in 1962), and Reichertz followed him as a promoter of this term [1].

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In many countries, especially in Europe, from the beginning of the seventies of the past century MI societies have been established. In the meantime IFIP-TC4 organized 1974 the first world congress of medical informatics MEDINFO in Stockholm, an event which stimulated other international meetings all over the world. As a result of such development, in Europe representatives of national MI societies (their names contained various terms: "health informatics", "data/information processing in medicine", etc.) met in Copenhagen in September 1976, under the auspices of the Office for Europe of the World Health Organization (WHO), founding EFMI. Reichertz became the first EFMI president. The IFIP-TC4 followed this trend and evolved in 1979 from a special interest group of IFIP to the independent MI organization – IMIA.

In a rather short time EFMI succeeded to launch its first big meeting – MIE 1978 in Cambridge, organized by the Medical Specialist Group of the British Computer Society. In that moment EFMI consisted of 12 constituent societies [2]. John Anderson, an esteemed expert in medical data processing education, edited the Proceedings of MIE 1978 [3]. From his "Introduction" we may extract the ideas predominating in medical informatics research and practice of those days: "The challenge of medical informatics has been well taken and the scientific papers by its members cover a wide range of topics dealing with medical records, laboratory investigation, indexing and administrative systems, nursing records, planning and administration modelling, data bases, text processing, transferability, user education, privacy, etc. Not published in this volume are presentations by industry about hardware and software. Also at the meeting there will be teaching sessions for doctors, nurses, scientists and administrators who are just entering this field which are also not published.

Medical informatics has established itself as an important area of medical activity and its growing application, as this conference illustrates, suggests a very rich potential for the future. Aids to medical decision making and modelling are newer areas of activity, where significant progress has been made.

Sociological changes have taken place to meet this challenge and developments in the issues of privacy and confidentiality are important, as also are user education, and the teaching of medical informatics to medical students and to doctors. Inevitably these changes illustrate that medical informatics has already had a significant impact on medical teaching and training as well as in the relationship of medicine to society."

At the 13th MIE Congress, held in Copenhagen 1996, 18 years after Cambridge, the editors of the Proceedings [4] were faced with a changed situation regarding the number of papers and the topics presented at the congress. Whereas the Cambridge Proceedings contained 80 papers, in Copenhagen the number of papers increased to 224 papers selected from 309 submissions. This massive growth is a clear sign of the popularity of MIE congresses and forced the Program committee to sharpen the criteria for the acceptance of submissions. It was not enough to get reviews by independent and impartial referees, but a scoring system was introduced based on five selection criteria comprising significance to medical informatics, healthcare and/or medicine, quality of scientific and/or technical content, originality and innovativeness, references to related prior work, and organization and clarity of presentation. Concerning the conference topics the Proceedings´ editors stated as follows: "It was amazing that we could find little reuse of the topics from the previous MIE and MEDINFO Congresses, indicating that medical informatics is a discipline in a process of change. For some papers this new classification may seem somewhat inadequate, but this is mostly the case for papers belonging to more than one topic, or belonging to a topic for which there are too

few contributions to constitute their own classification. To compensate for this and to ease the readers' effort in searching for papers of interest the papers were indexed according to the IMIA defined categories and listed in a Subject Index."

We are expecting now the proceedings of the present, 22nd Sarajevo MIE Congress, to see how much medical informatics progressed and changed since 1996. In more than a decade we are witnesses of rapid changes in social development, in which information and communication technologies (ICT) play an important role. The modern society at the transition from the second into the third millennium, frequently labeled as "information society", is asking for a new way of information thinking and working in all fields of human activity, and consequently in medicine and healthcare. Among new ICT, like mobile phones, fax, TV teletext, etc., the Internet plays the most important role. This ICT, using net resources all over the world, the World Wide Web (WWW or Web), expanded the transfer of information in all spheres of human activity, provoking a state described often as "Web-pandemic". This kind of change was already noted at MIE congresses. In the preface to the Proceedings of 17th MIE Congress, held in Budapest 2002, Rolf Engelbrecht, György Surján and Peter McNair noted appropriately that the spread of Internet is comparable with the importance of the Gutenberg's invention of printing technology, accelerating in the past for the order of magnitude communication of information saved until then in form of handwritten texts. Internet has again accelerated communication of information for the order of magnitude, this time by using new electronic technologies. Now we are eager to see how far we came after seven years.

But technological changes are only a part of the progress and change. We should always have in mind that technology should be man´s servant and not a master. Prof. Izet Mašić, in his welcome letter to the participants of MIE 2009 clearly reflects to that. In explaining the congress motto "Medical Informatics in a United and Healthy Europe", he writes: "The motto incorporates the role of medical informatics as a scientific, technological, philosophical, and medical discipline. It also raises the question as to whether and to what extent medical informatics is contributing to a new scientific, cultural, social and political community in Europe." Mašić also calls attention that "the expansion of technological power raises the need for ethical responsibility and for the preservation and promotion of human health". Let us hope that the result of MIE 2009 will really be a contribution to the advance of human health in Europe streaming to unity.

Coming back to the early days of developing medical informatics in the part of Europe we are gathering now, in Sarajevo at MIE 2009, it can be noted that at the beginning of the seventies of past century in several federal republics of former Yugoslavia (Bosnia and Herzegovina, Croatia, Serbia, Slovenia) there were installed some computer applications, mostly for processing of statistical data. Already in 1970 the Medical School of the University of Zagreb introduced compulsory appreciation courses in MI at the undergraduate and postgraduate levels for all medical students, with me as the lecturer. After the opening of the University Computing Center in Zagreb in 1972, operating a big computer installation with a terminal network covering all Croatian university centers, several hundreds of undergraduate and postgraduate students in Croatia could attend practical work at computer terminals. In health care institutions the number of MI professionals increased countrywide, so that the number of people engaged in MI research and development reached the critical level for active international cooperation. By the establishment of EFMI, operative since 1977, this cooperation was facilitated, as it was easier to raise limited funds (as it is customary for

emerging scientific disciplines) for contacts and participation at MI conferences in nearer destinations in Europe, than to travel to other continents.

The MIE 1978 Congress in Cambridge was the first opportunity to establish links with EFMI, and this was done by the presence of several participants from Zagreb. I was one of them and was allowed to attend the EFMI Council meetings as unofficial observer from Yugoslavia. Next year, at the MIE Congress in Berlin 1979, it was already possible for me to participate with a paper on educational problems in teaching MI to medical students. It was based on the eight-year experience of an activity which has at this moment been very new for most of the medical schools worldwide. In the meantime, I started to teach medical informatics, both at undergraduate and postgraduate level, as guest-professor at many universities and health institutions in Croatia and former Yugoslavia (Rijeka, Split, Osijek, Ljubljana, Maribor, Sarajevo, Skopje). Both me and my colleagues at several health institutions in Croatia formed research groups to start MI research and development projects. Also in other parts of Yugoslavia one could note appearance of MI projects. As the number of such projects increased, the results of their development started to be reported at conferences, mostly of general character, in sections specialized to MI. Such conferences were held mostly in Zagreb, being the strongest MI center in former Yugoslavia. At one of such conferences, the 2nd Conference on Informatics in Healthcare held in Zagreb in 1987, I got a mandate to officially represent Yugoslavia to EFMI.

The situation was ready for organizing own MI societies. Following the federal organization of Yugoslavia, an association of societies from each federal republic should be formed to represent our medical informaticians in EFMI and IMIA. At the end of 1989, four national societies/sections (MI societies from Bosnia and Herzegovina, Croatia and Slovenia, as well as the MI section of the Serbian Medical Society) formed the Yugoslav Association for Medical Informatics (YAMI), with the site in Zagreb, and with me as president. The MI section of the Macedonian Medical Association joined YAMI in 1990. After formal registration of YAMI and submission of official requests, YAMI became member of EFMI (as the 19th constituent national representative) and IMIA at the MIE 1990 Congress in Glasgow. I became member of EFMI Council and IMIA representative.

Everything seemed to be favorable for further development of MI in Yugoslavia. YAMI developed ambitious plans for future activity: organization of YAMI´s congresses each two years (the first was held in Belgrade in December 1990), candidacy for the first available term for a MEDINFO congress after 1998 (in Zagreb) and for any available term to organize a MIE congress (in Belgrade). But soon, already in the middle of 1990, stormy clouds started to cover the Yugoslav political horizon. The country fell apart in 1991, after the war in Slovenia and Croatia, and in 1992 war started in Bosnia and Herzegovina. The links between the YAMI´s constituent societies were blocked, and consequently YAMI was dissolved at the end of 1991 [5]. The plans for MEDINFO Zagreb and MIE Belgrade congresses had to be abandoned.

The war in Slovenia, Croatia and Bosnia and Herzegovina was of different duration. In Slovenia it was rather short, so the Slovenian Medical Informatics Association (SIMIA) could organize quickly its first national symposium in 1992, and after joining EFMI, succeeded to organize the MIE 1999 Congress in Ljubljana. The war in Croatia lasted longer, mainly to the middle of January 1992, so the Croatian Society for Medical Informatics (CSMI) could hold its first national symposium in 1993, and, after abandoning plans for a MEDINFO congress, organized the EFMI Special Topic Conference on the Brijuni Islands in 2007. The worst time was for the

Society for Medical Informatics of Bosnia and Herzegovina (BHSMI). In their country the armed conflict took place between March 1992 and November 1995. The siege of Sarajevo was an especially cruel time for our colleagues of BHSMI, most of them working in Sarajevo, since it began shortly after the outbreak of war in Bosnia and Herzegovina, and lasted to the end of it. But even in such terrible situation BHSMI, led by its president Prof. Izet Mašić, developed a rich activity, amazing for the given circumstances, succeeding to organize professional meetings, produce a number of publications and start the journal "Acta Informatica Medica". In the postwar period SMBIH organized national symposia and applied for organization of a MIE congress, succeeding to realize it in 2009. Consequently, we should consider the mandate to organize the MIE 2009 Congress in Sarajevo as the crown of all efforts of Prof. Mašić, struggling for it for a long time, supported by the BHSMI he is leading for years so successfully. Credit should also be given to EFMI, by deciding for Sarajevo, supporting building of "new medical, biomedical, and health informatics bridges between the western and eastern parts of the European world".

When looking at the present situation in the activities of former YAMI's members, BHSMI, CSMI and SIMIA became members of EFMI and IMIA, soon after acquiring membership in the UN and WHO on May 22, 1992, at their official meetings during the MEDINFO Congress in Geneva in September 1992. Thus, in a span of seventeen years, these societies could smoothly overcome the effects of past disturbing years at the beginning of the nineties of last century, continuously developing their international collaboration, being especially successful in EFMI by organizing two MIE congresses and one STC. YAMI's members from Macedonia and Serbia, however, did not join EFMI and IMIA up to now, what indicates slowing down of their development and international visibility. Let us wish that they will soon come again officially into international MI circles becoming members of EFMI and IMIA.

The MIE congresses have always be a great motivation for medical informaticians, both scientists and health professionals. They are recognizing them as places most favorable for presentation of own work, for exchange of ideas with colleagues and for learning what is new in MI in Europe and in the world. Let us wish that MIE 2009 Sarajevo is the venue of further advance in MI, as well as of new acquaintances and friendships.

LET MIE 2009 SARAJEVO BE A REAL CONTRIBUTION OF MEDICAL INFORMATICS TO A UNITED AND HEALTHY EUROPE!

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