New Approaches to Data Mining, Data Reduction, Data Exchange and Information Management in Seismology

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The goals of this joined research activity (JRA) are to develop for the Euro-Med community the techniques for future mining of the vast data coverage, to allow researchers access to high quality processed data and parameters. While the knowledge gained in seismology was in the past often limited by the lack of high quality data, this situation is nowadays reversing to the point that the vast amount of data collected cannot be analyzed and interpreted anymore by any sufficient and sustainable means. In addition, current dramatic advancements in modeling techniques (e.g., created in the FP6 Marie-Curie training network SPICE) and computational power create exciting opportunities for a seamless integration of synthetic and observed data. To meet these challenges, new innovative and interoperable approaches to managing and exploring seismological data have to be developed or adopted from other fields. We will present the current status of this research activity and show test bed applications how this new infrastructure might be used in the future.