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Information Systems for the SPD Experiment

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The SPD experiment will have to collect large amount of data: up to trillion events (records of a collision results) will have to be stored and analyzed, producing around ten petabytes yearly. A similar amount of simulated particle collisions for use in detector data analysis will be produced. This information will be distributed between a number of computing sites on a various storage locations, with duplication to avoid data loss and improve performance. The processing of the experimental data requires a wide variety of auxiliary information from many systems. To effectively access and handle all this data, as well as to operate detector itself, a number of information systems (IS) have to be created. A catalog of hardware components that SPD detector (Hardware database) is being developed, to provide information necessary in detector maintenance, data acquisition and processing. To support ongoing production of simulated data, a number of registries will be developed, including production registry, software version registry, geometry and magnetic field map registries. A catalog of hardware components that SPD detector (Hardware database) is being developed, to provide information and processing. With the developed, to provide information necessary in detector maintenance, data acquisition and processing in detector maintenance, data acquisition and processing will be developed, to provide information necessary in detector maintenance, data acquisition and processing. With the development of the software framework and data model a catalog of the SPD physics events (Event Index) will be created to help to search and acess event data in the distributed storage system.

Author: Dr ПРОКОШИН, Федор (JINR) Presenter: Dr ПРОКОШИН, Федор (JINR) Session Classification: Computing for MegaScience Projects