

SoDa: A PROJECT FOR THE INTEGRATION AND EXPLOITATION OF NETWORKED SOLAR RADIATION DATABASES

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There is a strong need for information on solar radiation for various environmental and industrial applications. Solar radiation is measured by ground networks of measuring stations, but well-controlled measurements are scarce due to large investment and maintenance costs. Hence, there is a large discrepancy between user request and available information. Large gains in terms of efficiency, costs, etc. will be attained by research institutes if relevant information were more easily available for virtually any geographical location at any time. Information and communications technologies could play a major role in solving this problem. Recent projects have demonstrated the usefulness of image processing techniques for extracting solar radiation information from Earth observation satellite images. Three major problems have been identified and should be solved to supply the customers with information relevant to their requests: improved access, improved space and time structures, improved matching to actual customer needs. The project SoDa is based on considerable previous experience, and intends to use this as a springboard to answer customer needs by an efficient use of advanced information and communication technologies. More precisely, an integration of information sources of different natures within a smart network will be realised. These sources include databases containing solar radiation parameters and other relevant information (meteorology, geography, terrain elevation, satellite-borne sensor parameters). Several of these databases originate from an advanced processing of remote sensing images. These databases are presently available separately. The information sources will also include application-specific user-oriented numerical models and advanced algorithms. The system will be validated through users trials, and its benefits will be assessed. The project SoDa focuses on several applications in environment and connected domains: air quality in cities, vegetation, coastal zones. This project SoDa is looking for customers ready to assess the value of the service in their applications.