



A Telemetric system for electromagnetic measurements based on Internet technologies and cloud computing

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A few years ago, real time communication, data collection and transmission from a field station measuring electromagnetic variations in the middle of nowhere, was a very expensive accomplishment. Nowadays, wireless communications and Internet access reach end users much easier and they are less expensive. WIFI, GPRS, 3G or Satellite Internet connections enable this to come true even at the most detached areas of our world where no cables can easily reach at a low cost.

Except for the effective potential range, these communication technologies can also give high speed, constant and low cost Internet access. As the Internet access speeds grow, a new term is coming to the foreground. Cloud Computing.

The terminology of Cloud Computing refers to a wide subset of Internet technologies usage that the clients:

- A) Do not need to store any valuable information in any physical infrastructure owned by themselves.
- B) Consume on-line resources from a third party provider, enabling them to focus on their productivity without having to worry about their data or any other possible local hardware failure.
- C) Collaborate and share between associates faster and easier, as they can access their work from anywhere, just with the existence of Internet access.

This telemetric system, relies on Cloud Computing for the delivery of collected data from the field station to an on-line storage. Collaborators and scientists, can be synchronized with the on-line storage, make changes and synchronize vice versa.

Local storage at the field station end, is only needed in the case of an Internet connection failure, so that the data can be stored until the Internet connection is regained. Local storage at the user's side is optional, however desirable thus giving the ability to work off-line and synchronize again the changes when one goes on-line.