

## **East-South European countries Large-Communication-Data Capture (LCDC) network**

(creation and capabilities)

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The present work describes the possibilities of the creation and installation of **Large-Communication Data Capture (LCDC)** network in the local European East-South area, for countries as EU members Bulgaria, Romania, Greece and also for EU candidates and pre-candidates – FRY-Macedonia, Serbia, Montenegro and other local regions. The purpose of this LCDC is to ensure the capability of capturing, transmitting, exchange, storage and processing of large and very large volume of high-speed data flow from different sources (distant sensors, meteorological stations, satellite channels, data exchange channels, fire control centers, earthquake alert stations, river and sea observation stations and video visible and Infra-Red cameras). The captured and processed information could be used for different National and International/European purposes, researches, disaster prevention and monitoring, weather and meteorological projects and programs, video-information exchange, statistics and mapping.

The investigated and evaluated methods, equipments and also the local providers and installers of this kind of services showed the practical applicable systems and equipment – such as High-Speed VDSL2/ADSL+ Data channels up to 100Mbps for local areas Data capturing, using of Fiber Optics SMF underground installations for 40Gbps connection of the regional Data Centers and using of more than 400 servers for Central Data Centre of **LCDC**.

The results of creation of the described **LCDC** will be a total capacity of capturing of high speed of 40Gbps data flow – equivalent of 40,000 Video Cameras at normal TV resolution each and storage capacity of more than 2-3 PetaBytes (2-3,000 TeraBytes) hot archive and more than 500 PetaBytes Long-Term storage archive. Also the capability of processing of the mentioned large Data massive by using of Multi-Processor software structure, based on the same 400 servers with proceeding speed of about several TFLOPS, depending of the Core structure and of the price of the 400 (or 2x400) Servers processors installed.