

Title: Advanced Video Applications in Advanced Infrastructures

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Abstract:

Many NRENs worldwide forming new powerful IT infrastructures and gradually expanding network capacities. In this talk we will demonstrate examples of advanced sophisticated applications which could not be used without sophisticated and powerful infrastructures. Such applications always create special demands on complicated networking set and used most advanced multimedia tools and devices. It is challenge for networkers and all IT people involved. But it is only way how to do progress. The talk will also provide new information about the latest developments on the tools Ultragrid and MVTP4K developed in CESNET for high speed and high resolution video transmission.

We will talk about remote collaboration of users in well recognized and form communities (medical, culture, etc.) across the countries and continents. Our applications are mostly based on video communication in high resolution (4k, 8k or 3D). The experience shows that it attracts even the most conservative individuals. The images enlarge presence perception and it open new idea how to use existing IT infrastructures. We will talk about immerse interactions during which user can access historical places existing today only in 3D computer models or how to access dangerous places. Our talk will discuss the challenges and experiences gained with organizing cyber performances for wide international community in frame of APAN meetings. We will also discuss using large scale display SAGE or LED walls with dynamic zooming for visualization of large territories for viewing extreme details in case of emergency situations or using it in medical education.