

BASIC INFORMATION ON SUB-PROJECT

NAME OF PROGRAMME/FUND	Scholarship Fund - Sciex NMS ^{ch}
RESEARCH FIELD AND OTHER RESEARCH FIELDS INVOLVED (if applicable)	Engineering Sciences
TITLE OF THE SUB-PROJECT	Compression of Holographic Visual Information (CHVI)
REGION OF THE CZECH REPUBLIC (according to the location of the home institution)	Prague
GRANT AMOUNT SPENT	96 970,81 CHF
INTERMEDIATE BODY	Swissuniversities
HOME INSTITUTION	Czech Technical University in Prague Department of Electrical Engineering
HOST INSTITUTION	EPF Lausanne School of Engineering, Electrical Engineering Institute
NAME OF THE FELLOW	Martin Řeřábek

<p>ABSTRACT OF THE SUB-PROJECT</p>	<p>Holography has been widely spreading into many fields, e.g. security, displays, and medical applications. This proposal evolves around holographic visual information processing, including its acquisition, display, efficient representation and coding. Both still image and moving video will be considered. In this context, efficient coding of holographic content will be studied, implemented, and evaluated. This is motivated by the fact that holographic data represents a huge amount of information which unless compressed, will render their storage and transmission impractical. Therefore, efficient compression in holographic visual information is a critical point. Holographic information compression rate is connected directly to the practice of holographic information acquisition, transmission/storage and display, in real time. The main aim of this project is to develop compression techniques for holographic visual data based on compressive sensing, taking into account acquisition, representation, and compression at the same time. This includes creation of the experimental setups for holographic visual data acquisition and display, and evaluation of developed technologies, based on new quality assessment methods for holographic visual data evaluation.</p>
<p>DATE OF REALISATION OF THE FELLOWSHIP</p>	<p>1.9.2010 - 29.2.2012</p>
<p>MORE INFORMATION ON THE PROGRAMME</p>	<p>www.sciex.ch</p>