

INVITATION

JOIN NIVA

Discover **I**ntuitive en **V**ironment to **A**dministrare
stage-based events and create enhanced content for them



PROJECT LEADER



TECHNOLOGIE-ZENTRUM INFORMATIK UND INFORMATIONSTECHNIK
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MOTIVATION

The theatre and event production has evolved with the use of new technologies applied to sound or light design. 2D and 3D stage data sets are available and used with CAD software. Nevertheless, new technology developments have not been fully applied to create virtual models of big stages: This is still a time-consuming and work-intensive process and mainly performed manually. The possibilities and benefits of an accurate virtual 3D model of a stage are not used at all. Developing a software environment including new technologies and offering added value services and functionalities for professionals working on staging a theatre and event production. This environment would support communication, information, design processes as well as logistics issues. For instance, it can be used for prior planning and simulation of acoustics or lightning setups as well as data basis for augmented reality devices. Additionally, it would also contribute to an easier and more efficient transfer of existing productions to different stages optimizing planning processes from the beginning of the developing from a theatre or event production until staging it, without disturbing the individual processes of any theatre or event production.



OBJECTIVES

The DIVA project proposes the development of a collaborative software environment for planning, creating, communication and information in complex processes in theatre and event productions such as stage design, back stage processes and related organisational matters. It is based on an experimental combination of technologies like 3D scanning and imaging, integrating sound and light formats and opening interfaces for augmented and virtual reality devices. The result of the collaborative digital working environment for staging would cover all these aspects.

COMMUNICATION AND INFORMATION

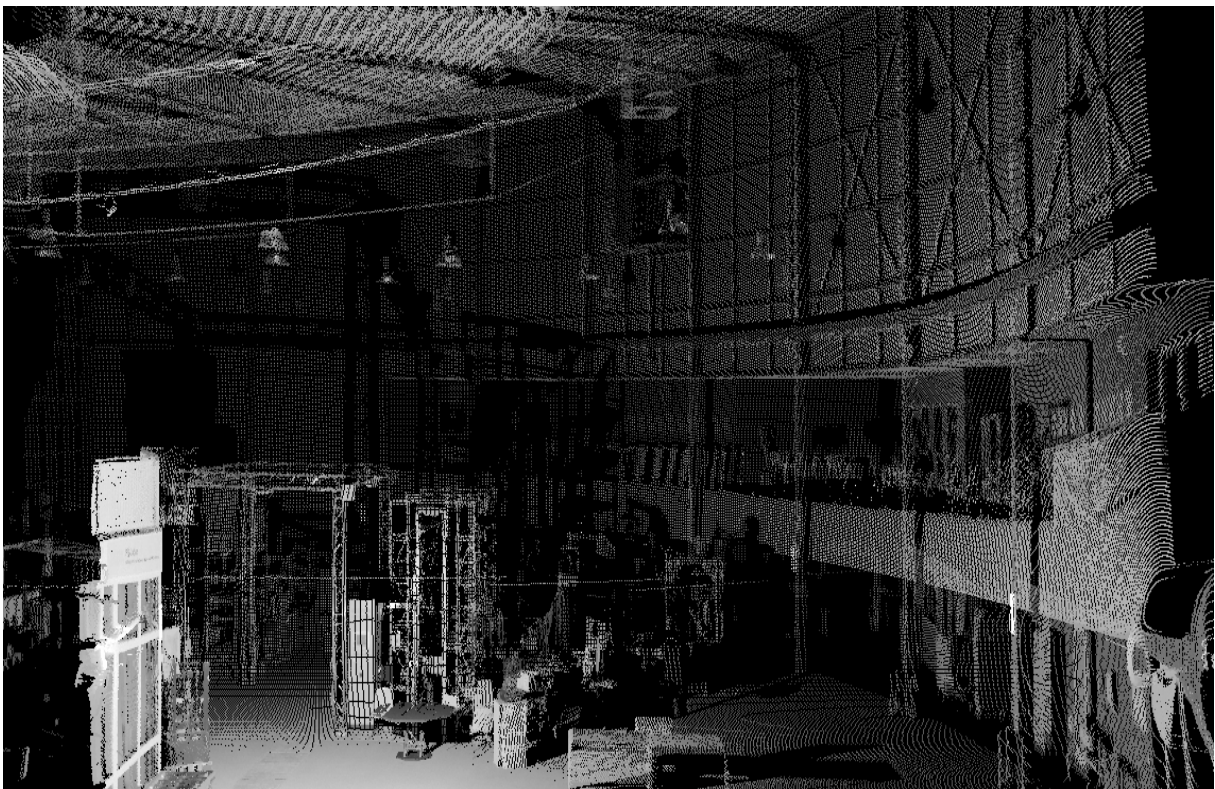
Especially in production processes DIVA would help to inform all the participants about decisions from the director, at dramaturgy and stage design level, giving information about the status in all workshops and customizing the time schedule. DIVA is planned as an intuitive environment to administrate stage-based events and create content for them. The intended environment will:

1. Promote collaborative work, providing global access to all participants.
2. Supports production process from first sketches until the final step.
3. Provide possibilities for live control of the show and can make production process as well as the final production accessible for an audience from different parts of the world.

SUPPORT THE STAGE-DESIGN PROCESS WITH DIGITAL TECHNOLOGIES

DIVA will create 3D virtual models from theatre or other event stages, containing their features, requisites and characteristics and will make this information available for planning production and stage design. 3D data can be used for all necessary implementations in stage design, dramaturgy, lightning, directing, stage planning and all related processes in the background. DIVA will be able of visualizing the production environment and show developments and changes at the stage or in lightning in real-time. Changes and associated tasks are passed on to the designated recipients and are integrated with the specific requirements in the planning processes. DIVA will be able to adapt to all control software in a

theatre production via standardized and open interfaces and enables direct access to these features. In the event of a transfer of the production to another theatre DIVA helps to coordinate the necessary processes and would schedule on basis of 3D scans and advanced specifications. DIVA will be able to check the feasibility of the transfer in terms of technical challenges, logistics, time schedule and budget planning. Figure 1 shows an example 3D scan of the BIBA hall. The scan will be used for 3D model generation and can be easily changed or extended by other 3D objects such as specific stage related requisites. It will also provide the basis for using augmented or virtual reality devices.



1. 3D Scan of BIBA hall

MANAGEMENT AND TECHNOLOGY OPTIONS FOR COOPERATIVE STAGE DESIGN

DIVA uses personalized equipment for planning, organization, development, creation, communication and information. In a planning situation the system shares relevant data with participants in a project. A cooperative work space will be established to allow interaction and transparency. All participants are informed and priorities can be determined. Ongoing documentation and recording from every step in a production. DIVA builds up an archive which can be used for information, transparency of processes and implementation in other projects, sharing with productions or other theatres. All features like process and project management are supported and combined in the DIVA system. DIVA provides an environment for all requirements to fulfill specific tasks only giving important and relevant information.

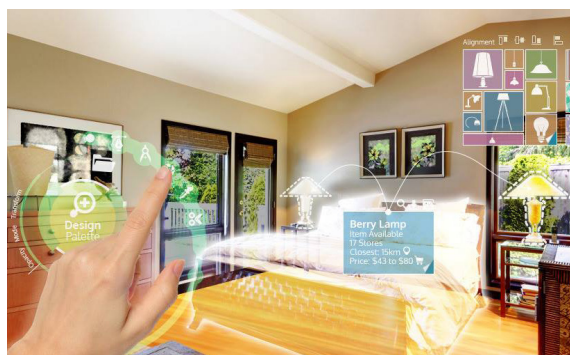
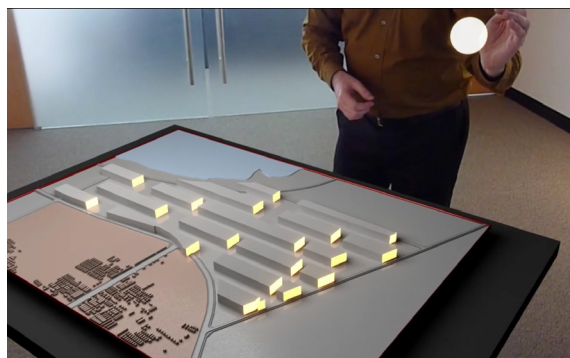
DIVA USES AUGMENTED REALITY

DIVA will be able to generate simultaneous environments in which all conditions and processes like stage design, lightning, timing, dramaturgy, appearance, and costumes can be visualized and modified. With these possibilities decisions and tasks from all stage production jobs and from the workshops behind the stage can be easily and transparently communicated. The cultural partners of DIVA take special interest and responsibility in this issue. During an event additional information such as translation or information about performers can be provided. Additional information can be added to a theatre piece by augmented reality in real-time. Users can interact with the preview and modify it, set light, sound and digital effects. Augmented Reality enables theatres to get an enriched, simulating real-life preview of a stage in planning in different theatres places.

IMPROVEMENT OF LOGISTICS PROCESSES

All collected data such as measurements scans or scheduling information can be used to improve external and internal logistics processes. The scans of stages and requisites can be used for transport planning in theatre tours.

2. Interaction with Augmented 3D Model
3. Augmented Reality Layer



INTENDED CALLS TO SUBMIT THE DIVA PROPOSAL

Programme HORIZON 2020 in the Call REFLECTIVE-7-2014 due for submission on 30th September 2014. A further call for proposals of the CREATIVE EUROPE Programme in late autumn 2014.

COME AND JOIN US!

17.07.2014 – 18.07.2014

Bremen, Germany

The DIVA consortium organizes a meeting on 17.07.2014 – 18.07.2014 in Bremen, Germany with all interested partners to present and discuss the project in detail.

PARTICIPATION / COOPERATION TO BE CONFIRMED:



prolight+sound

STAGE YOUR IDEAS!