# CineGrid

## ⓐ Waag Society

## Introduction

**This document contains a introduction of CineGrid Amsterdam: the first European node in the international CineGrid network. CineGrid Amsterdam is being developed by SURFnet, SARA, University of Amsterdam and Waag Society, in close cooperation with its (inter)national partners. It is due to come on-line in early 2008.**

## CineGrid

CineGrid is an international research initiative - based in the USA, Japan and Europe - that combines state-of-the-art visual and audio recording, high-speed computer networks and ultra sharp projection facilities to record and deliver high quality moving images and sound over optical networks and across continents.



The image quality is better than 35 mm film recording and outperforms the human eye. The resulting impression is overwhelming and resembles a presence at a live performance. The technology is called '4K' after the number of pixels in the image, 4.096 x 2.160 per frame; four times High Definition Television. One-and-a-half-hour recording contains roughly 3.5 Terabits of data –about 750 DVD's.

Currently CineGrid is in its infancy. An international group of renowned audiovisual, multimedia and networking scientists is researching and tuning all the steps that lay between theory and actual state-of-the-art. The technology, consisting of camera's, recording equipment, projectors and optical networks, is

starting to develop and will become commercially available in a few years. At this moment 4K content can be appreciated at only three venues in it's intended quality: two in California and one in Japan.



More information:
**http://www.cinegrid.org**
**http://www.cinegrid.nl**

Currently most CineGrid screenings are limited to a few minutes, sometimes only seconds, of demo and pilot material. There is already an awe-factor in this material, but it is a far cry from the real potential, both artistic and scientific.

Hollywood studios are doing experiments, and cinema's worldwide are thinking about digital projection: however, still in 2K. It takes four 2K projectors to show a true 4K image. There are plenty of research and business opportunities and technical and artistic challenges are huge.

## CineGrid Amsterdam

With the help of the CineGrid founding partners in America and Japan, the Dutch organisations SURFnet, SARA, the University of Amsterdam and Waag Society are setting up the CineGrid node Europe in Amsterdam. This consortium contains knowledge on infrastructure, data storage, academics and cultural content creation.

More information:
**http://www.surfnet.nl**
**http://www.sara.nl**
**http://www.science.uva.nl**
**http://www.waag.org**

A large consortium of content production partners is being formed in order to produce 4K material and integrate this new technology in the Creative Industries and the educational field. Amongst others collaboration has been established with the Dutch Institute for Sound and Vision, Dell, Film Museum, Internet Society, Fabchannel, Holland Festival, Media Guild, NOB, Pathé Cinema, Sandberg Institute, TNO, Dutch Film and Television Academy and Lost & Found.

## Era la Notte

In a globally unique experiment at the Holland Festival 2007 ultra-high quality content was produced of the performance of Era la Notte. This content has been transmitted live in 4K to San Diego, and in 2K to Prague, Stockholm, Barcelona and several universities in the US. To make this happen a fruitful collaboration was formed with KEIO University (Japan), University of California, San Diego, CineGrid.org and Pacific Interface (USA) and the Holland Festival, SURFnet, SARA, Cultuurfabriek, BeamSystems and Waag Society (Holland). This event has gained worldwide attention and global press coverage.





Some of the senior researchers involved in CineGrid are Tom DeFanti (CalIT2 University), Peter Otto (CalIT2 University), Laurin Herr and Natalie Van Osdol (Pacific Interface Inc.), and Cees de Laat (University of Amsterdam). They all have a long standing reputation in the field and are avid supporters of the Dutch CineGrid initiative.

## Goals and Programmes

CineGrid Amsterdam has five goals:
1. Enable research, development, and production of ultra-high quality, interactive, digital media, using advanced optical networks and grid computing;
2. International collaboration and the sharing of knowledge;
3. Knowledge development and training of media professionals in the techniques and practices of the (near) future;
4. Provide opportunities to new and existing podia to experiment with the screening of films and multimedia in unseen quality and speed;
5. Development of new business cases, new formats and new ways of collaboration.

CineGrid Amsterdam will consist of a center of excellence to produce, view, broadcast, transport and store 4K video and audio material. On top of this platform, four programmes will be developed:
1. Educational;
2. Scientific;
3. Cultural;
4. Commercial.
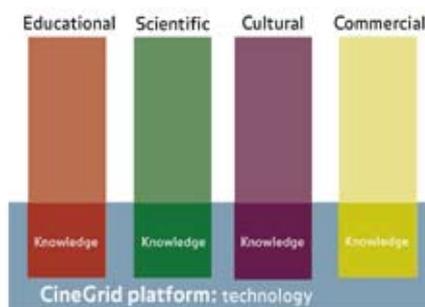


With these programmes in place the following topics will be researched and turned into services:
• Digitizing and archiving;
• Secure distribution and storage;
• Live performances;
• Real-time collaboration;
• Production: filming and editing;
• Visualization and gaming.

## Planning

The CineGrid Amsterdam project has three distinct phases:
1. January until June 2007: development of the project plan, business case and funding strategy;
2. June till the end of 2007: demonstrations and seminars to promote CineGrid Amsterdam and it's possibilities, notably at the Holland Festival, the Cross Media Week and the International Documentary Festival;
3. 2008; Set up of the platform and programmes that will make use of it.

## Contact

For information, questions or remarks Frank Kresin, programme manager Waag Society, can be contacted at frank@waag.org and direct phone number:
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## Waag Society

Waag Society is one of the leading e-culture labs in Europe. It has been involved in many pioneering Internet projects since it's foundation in 1996. It is active in the fields of Health Care, Culture, Education and Public Domain, with a strong focus on societal benefits on the use of new technology. Waag Society is headed by Marleen Stikker who is a leading figure both national and international in the fields of e-Culture and the Creative Industries.