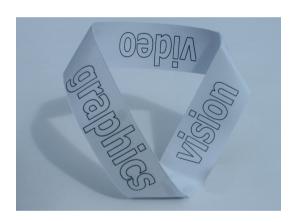
Institute of Mathematics and its Applications Vision, Video, and Graphics 2003

University of Bath July 10-11th, 2003

Conference Chairs

Peter Hall and Philip Willis Media Technology Research Centre University of Bath, UK



Proceedings Production Editor Dieter Fellner, TU Braunschweig

Sponsored by the IMA and EPSRC In cooperation with ACM SIGGRAPH, BMVA and the Eurographics Association



This work is subject to copyright.

All rights reserved, whether the whole or part of the material is concerned, specifically those of translation, reprinting, re-use of illustrations, broadcasting, reproduction by photocopying machines or similar means, and storage in data banks.

Copyright ©2003 by the Eurographics Association PO Box 16, CH-1288 Aire-la-Ville, Switzerland

Published by the Eurographics Association PO Box 16, CH-1288 Aire-la-Ville, Switzerland

Printed in Germany

Cover design by Stefanie Behnke

ISBN 3-905673-54-1

The electronic version of the proceedings is available from the Eurographics Digital Library at http://diglib.eg.org

Table of Contents

Sponsors

Keynote 1: Steve Seitz
Frontiers in 3D Photography: Reflectance and Motion
Paper Session 1: Virtual Actors and Studios
A Flexible and Versatile Studio for Synchronized Multi-View Video Recording
Towards A 3D Virtual Studio for Human Appearance Capture
Paper Session 2: Vision Methods 1
Semi-Automated Logging for Professional Media Applications
An Eigenvector Method for Surface Recovery
3D S.O.M. – A Commercial Software Solution to 3D Scanning
Poster Session 1
Real-Time Capture, Reconstruction and Insertion into Virtual World of Human Actors
A Novel Form of Pointing Device
A Region Adjacency Tree Approach to the Detection and Design of Fiducials
On the Editing of Images: Selecting, Cutting and Filling-in
Real-Time Per-pixel Rendering of Bump-mapped Textures Captured using Photometric Stereo
Parameter Acquisition of Geometric Primitives within Virtual Environments for Internet-Based Telerobotics 89 J. Tan and G. Clapworthy
Keynote 2: Brian Barsky
Investigating Occlusion and Discretization Problems in Image-Based Blurring Techniques

Paper Session 3: Video and Animation
Visualising Video Sequences using Direct Volume Rendering
Quasi-3D cell-based Animation
Cartoon-Style Rendering of Motion from Video
Keynote 3: Steve Feiner
User Interfaces for Mobile Augmented Reality Systems
Paper Session 4: Faces
Coding 3D Facial Models for Mugshot Applications
Use and Re-use of Facial Motion Capture Data
Papers Session 5: Vision Methods 2
Models from Image Triplets using Epipolar Gradient Features
Iterative Multi-Planar Camera Calibration: Improving Stability using Model Selection
A Vision-Based Location System using Fiducials
Poster Session 2
Prometheus: Facial Modelling, Tracking and Puppetry
Interpretation of Fuzzy Logic For Texture Queries in CBIR
Studying the Fidelity Requirements for a Virtual Ballet Dancer
Digitisation to Presentation — Building Virtual Museum Exhibitions
Applications of Clifford Algebra in Mixed Reality Environment
Collaborative Vision and Interactive Mosaicing
Paper Session 6: Texture and Surface Properties
Lambertian Correction for Rough and Specular Surfaces
Extending Natural Textures with Multi-Scale Synthesis
Enhanced Texture Editing using Self Similarity
Keynote 4: Markus Gross
Efficient 3D Content Creation using Point Sampled Geometry
Organisation

Preface

Welcome to the first International conference on Vision, Video, and Graphics. VVG began with the simple idea of gathering together, under one roof, people interested in the convergence of Vision, Video, and Graphics to share problem and exchange solutions. Initially it was intended as a domestic event, confined to the UK; indeed the name is deliberate but slight corruption of Video, Vision and Graphics — a meeting organised by Mark Hylton of the EPSRC (a UK funding body) in May 2002. Mark continue to promote converge, and will come along to VVG for a specially convened session.

Interest in VVG proved high, sufficiently high in fact to push VVG into a more ambitious agenda. We now have an truly international organising committee comprising members and programme.

Our main focus when organising VVG was quality. The standard of submissions was very high. In fact, not only have we been able to put forward papers to a special issue of Graphical Models, as originally planned, but also to a special section of Image and Vision Computing. We are the, pleased offer you our programme, which is headlined by four excellent invited speakers.

We must send thanks to everyone who contributed to VVG: Ralph Martin at Cardiff University who first asked if we wanted to "help" organise a conference; Emanuele Trucco worked very hard in too many area to mention, Markus Magnor who took on the responsibility for organising publicity so well. David Youdan and Lucy Nye at IMA for patience and support; Dieter Fellner and Stefanie Behnke of Eurographics for helping so much with publishing and printing; Mark Hylton at EPSRC who's enthusiasm for the convergence area helps makes events like this possible; the the referees and everyone in the International Programme Committee for their expertise, and of course the authors and delegates.

We hope very much that we've put together a meeting you find both enjoyable and informative.

Peter Hall and Philip Willis

Sponsors

Sponsored by:



Institute for Mathematics and its Applications



Engineering and Physical Sciences Research Council

In association with:



BMVA British Machine Vision Association



Eurographics Association