

Contents

Introduction	7
1. Telecommunications	
Philippe Quéau:	
Virtual Communities: The Art of Presence	27
Maria Grazia Mattei:	
Telematic Art.....	33
Ryohei Nakatsu:	
Image/Speech Processing Adopting an Artistic Approach – Toward Integration of Art and Technology	38
2. Scientific Visualization	
Donna J. Cox:	
What Can an Artist Do for Science: "Cosmic Voyage" IMAX Film.....	53
Przemyslaw Prusinkiewicz:	
In Search of the Right Abstraction: The Synergy Between Art, Science, and Information Technology in the Modeling of Natural Phenomena....	60
Demetri Terzopoulos:	
Artificial Life for Computer Animation.....	69
3. Artificial Life	
Thomas S. Ray:	
Evolution as Artist.....	81
Louis Bec:	
Artificial Life under Tension – A Lesson in Epistemological Fabulation ...	92
Machiko Kusahara:	
Transition of Concept of Life in Art and Culture from Automata to Network	99
4. Artists as Researchers	
Michael Naimark:	
Art ("and" or "versus") Technology – Some Personal Observations.....	123
Monika Fleischmann and Wolfgang Strauss:	
Images of the Body in the House of Illusion.....	133
Christa Sommerer and Laurent Mignonneau:	
Art as a Living System.....	148
Jeffrey Shaw:	
Convergence of Art, Science and Technology?.....	162
Peter Weibel:	
The Unreasonable Effectiveness of the Methodological Convergence of Art and Science.....	167

5. Chaos and Complex Systems	
Gottfried Mayer-Kress:	
Reflections of Chaos in Music and Art	183
Otto E. Rossler:	
Can a Program Force the Programmer to Reply.	193
6. Public Spaces	
Toshiharu Itoh:	
ICC (InterCommunication Center): The Matrix of Communication and Imagination	199
Hans-Peter Schwarz:	
New Art Needs New Art Venues – Art, Technology and the Museum . . .	207
Peter Richards:	
From London to Nagasaki – The Roots of Interactive Art @ the Exploratorium.	215
7. Education of Art & Science	
Itsuo Sakane :	
The Historical Background of Science-Art and Its Potential Future Impact	227
Michael Klein:	
The Evolution of Images Between Chaos, Art and New Media	235
8. Art & Science in Historical and Cultural Context	
Cynthia Goodman:	
Art and Technology: The Ineluctable Liaison	247
Erkki Huhtamo:	
Seeing at a Distance – Towards an Archaeology of the “Small Screen” . .	262
Roy Ascott:	
The Technoetic Dimension of Art	279
Biographies	291
Bibliography	307
Index.	317