



COMMUNICATIONS

COMMUNICATIONS

PROCEEDINGS

5TH MAN-COMPUTER COMMUNICATIONS
CONFERENCE

MAY 26 AND 27

CALGARY

1977

COMPTES RENDUS

5IÈME CONFÉRENCE DES COMMUNICATIONS
ENTRE L'HOMME ET L'ORDINATEUR

26 ET 27 MAI

CALGARY

1977

PROCEEDINGS

5TH MAN-COMPUTER COMMUNICATIONS
CONFERENCE

MAY 26 AND 27

CALGARY

1977

COMPTES RENDUS

5IÈME CONFÉRENCE DES COMMUNICATIONS
ENTRE L'HOMME ET L'ORDINATEUR

26 ET 27 MAI

CALGARY

1977

Papers appearing in this volume are in the order of their presentation at the Conference. Papers were prepared by authors following a predetermined format and were reproduced from camera ready copy.

Published under the sponsorship of: Division of Electrical Engineering, National Research Council of Canada

Organizing Committee

<i>General Chairman</i>	D.R. Hill, University of Calgary
<i>Program Chairman</i>	W.A. Davis, University of Alberta
<i>Proceedings Editor</i>	M. Wein, National Research Council E. Swail, " " "
<i>Local Arrangements</i>	W. Ross, University of Calgary L. Sinkey, " " H. Baecker, " " H. Hallworth, " "
<i>Conference Office</i>	Wanda Ohlhauser, University of Calgary

Copies obtainable from: Computer Graphics Section, 5th Man-Computer Communications Conference,
National Research Council of Canada, Ottawa, Ontario K1A 0R8, Canada.

Price: \$7.00

La séquence des mémoires inclus dans ce volume est celle de leurs présentations à la conférence. Les mémoires ont été préparés par les auteurs suivant un modèle prédéterminé et ont été reproduits directement de leurs originaux.

Publication parrainée par: La Division de génie électrique, Conseil national de recherches du Canada

Comité de la conférence

<i>Président général</i>	D.R. Hill, University of Calgary
<i>Comité du programme, Président</i>	W.A. Davis, University of Alberta
<i>Editeur du compte rendu</i>	M. Wein, Conseil national de recherches E. Swail, " " "
<i>Modalités</i>	W. Ross, University of Calgary L. Sinkey, " " H. Baecker, " " H. Hallworth, " "
<i>Secrétariat de la conférence</i>	Wanda Ohlhauser, University of Calgary

Copies disponibles du: Systèmes graphiques par ordinateur, 5ième Conférence des communications entre l'homme et l'ordinateur, Conseil national de recherches du Canada, Ottawa, Ontario K1A 0R8, Canada.

Prix: \$7.00

TABLE OF CONTENTS / TABLE DES MATIÈRES

SESSION I (a.m. May 26 Mai) *Chairman, Herb Bown*

Man-computer communications and CAI <i>Steve Hunka</i>	1
The use of WATCHMI to implement a structured approach to CAI courseware design <i>B.L. Wills and J.G. Wilson</i>	21

SESSION II (a.m. May 26 Mai) *Chairman, Bill Ross*

Touch sensitive digitizer (TSD) <i>R. Prytula</i>	29
A video terminal for interactive graphics <i>N. Burtnyk, P. Carey, K. Steele, and M. Wein</i>	31
Selection of the most legible matrix characters in computer-man communications <i>Ching Y. Suen and Michael G. Strobel</i>	45

SESSION III (p.m. May 26 Mai) *Chairman, Nestor Burtnyk*

Interactive digitization of sounding values on charts <i>R. Bolton and A.R. Boyle</i>	53
GOMADS — An interactive editing system for hydrographic charts <i>J.L. Kestner and S.R. Oraas</i>	63
A data sub-language for casual users <i>I.A. Macleod</i>	73

SESSION IV (p.m. May 26 Mai) *Chairman, Larry Sinkey*

CHOREO: An interactive computer model for choreography <i>G.J. Savage and J.M. Officer</i>	83
Interactive graphics as a vehicle for the enhancement of human creativity <i>R.M. Baecker</i>	93
Computer graphic aided music composition <i>T. Goldberg and G.F. Schrack</i>	103

SESSION V	(a.m. May 27 Mai)	Chairman, Marceli Wein	
The characteristics of a standard man-computer interface			113
<i>R.B. Williams</i>			
User template mode for interactive graphics			115
<i>U.G. Lama</i>			
A minimum configuration microprocessor based data acquisition, postprocessing and reporting system			125
<i>P.J. Zsombor-Murray</i>			
SESSION VI	(a.m. May 27 Mai)	Chairman, G. Schrack	
A program structure for event-based speech synthesis by rules within a flexible segmental framework			159
<i>David R. Hill</i>			
Synthesizing British English rhythm — a structured approach			173
<i>I.H. Witten and A. Smith</i>			
Machine aided analysis and recognition of speech			187
<i>D.C. Levinson</i>			
SESSION VII	(p.m. May 27 Mai)	Chairman, T.K. Dudley	
Application of a multi-purpose computer system with interactive graphics			197
<i>S.J. Kubina, C.W. Trueman, A. Skalina, and E. Cerny</i>			
Automated visual representation of linear graphs			209
<i>R. Brien Maguire</i>			
Stereo space, shading and shadowing			219
<i>K.S. Andonian and S. Toida</i>			
SESSION VIII	(p.m. May 27 Mai)	Chairman, David Hill	
Interactive graphics for the design of feedback control systems			231
<i>J.M. Wells, W.H. Lehn, and W. Podaima</i>			
The dichotomy between market needs and what computerized image processing can provide			243
<i>T. Kasvand</i>			
The computer as an artistic tool — An attempt to program aesthetic concepts			253
<i>L. Sveinson</i>			

