

AD-A154 449

FUTURE PERCEPTION AND SHAPE FROM TEXTURE(U) ILLINOIS
UNIV AT URBANA COORDINATED SCIENCE LAB N AHUJA SEP 83
AFOSR-TR-85-0349 AFOSR-82-0317

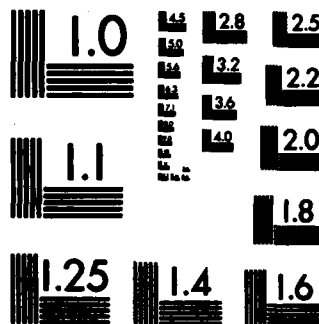
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MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

REPORT DOCUMENTATION PAGE

1a. REPORT SECURITY CLASSIFICATION UNCLASSIFIED			1b. RESTRICTIVE MARKINGS		
2a. SECURITY CLASSIFICATION AUTHORITY			3. DISTRIBUTION/AVAILABILITY OF REPORT Approved for public release; distribution unlimited.		
2b. DECLASSIFICATION/DOWNGRADING SCHEDULE					
4. PERFORMING ORGANIZATION REPORT NUMBER(S) AD-A154 449			5. MONITORING ORGANIZATION REPORT NUMBER(S) AFOSR-TR. 35-0349		
6a. NAME OF PERFORMING ORGANIZATION University of Illinois		6b. OFFICE SYMBOL (If applicable)		7a. NAME OF MONITORING ORGANIZATION Air Force Office of Scientific Research	
6c. ADDRESS (City, State and ZIP Code) Coordinated Science Laboratory 1101 West Springfield Avenue Urbana IL 61801			7b. ADDRESS (City, State and ZIP Code) Directorate of Mathematical & Information Sciences, Bolling AFB DC 20332-6448		
8a. NAME OF FUNDING/SPONSORING ORGANIZATION AFOSR		8b. OFFICE SYMBOL (If applicable) NM		9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER AFOSR-82-0317	
8c. ADDRESS (City, State and ZIP Code) Bolling AFB DC 20332-6448			10. SOURCE OF FUNDING NOS.		
			PROGRAM ELEMENT NO. 61102F	PROJECT NO. 2304	TASK NO. A7
11. TITLE (Include Security Classification) TEXTURE PERCEPTION AND SHAPE FROM TEXTURE , INTERIM SCIENTIFIC REPORT, GRANT AFOSR-82-0317					
12. PERSONAL AUTHOR(S) Narendra Ahuja / 1 September 1982 - 31 August 1983					
13a. TYPE OF REPORT Interim		13b. TIME COVERED FROM 1/9/82 TO 31/8/83		14. DATE OF REPORT (Yr., Mo., Day) Sep 83	
15. PAGE COUNT 1					
16. SUPPLEMENTARY NOTATION					
17. COSATI CODES			18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)		
FIELD	GROUP	SUB. GR.			
19. ABSTRACT (Continue on reverse if necessary and identify by block number)					
>Research during this period has resulted in the development of algorithms for perceptual segmentation of the most basic of the texture representations - the dot pattern representation. Segmentation is based on a variety of perceptual grouping criteria, including dot density, magnitude and direction of density gradients, and shape characteristics of the segments. DTIC FILE COPY DTIC ELECTE MAY 02 1985					
20. DISTRIBUTION/AVAILABILITY OF ABSTRACT UNCLASSIFIED/UNLIMITED ☒ SAME AS RPT. ☐ DTIC USERS ☐			21. ABSTRACT SECURITY CLASSIFICATION UNCLASSIFIED		
22a. NAME OF RESPONSIBLE INDIVIDUAL Dr. Robert N. Buchal			22b. TELEPHONE NUMBER (Include Area Code) (202) 767- 4939		22c. OFFICE SYMBOL NM

INTERIM REPORT FOR GRANT AFOSR-82-0317, SEPTEMBER 1983

We have developed algorithms for perceptual segmentation of the most basic of the texture representations - the dot pattern representation. Segmentation is based on a variety of perceptual grouping criteria. Among them are dot density, magnitude and direction of density gradients, and shape characteristics of the segments. Segmentation is carried out in two phases. In the first phase, the lowest level perceptual groupings are obtained based upon local criteria. This consists of three independent and parallel processes the results of which are fed to a fourth process. The functions of the first three processes are to detect 1) interior points, 2) borders, and 3) curves, using geometric properties of the neighborhoods generated by a Voronoi tessellation of the dot pattern. The fourth process, that will combine the results of the first three using Gestalt criteria such as smoothness of borders, good continuity, etc., is currently being implemented. The implementation of the fourth process will mark the end of the first phase, with the lowest level perceptual groupings of the dots as the output.

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