

Principal Researcher	Yukio KOSUGI			Number of Researchers	3	
Research Institution • Department • Title	Professor, Interdisciplinary Graduate School of Science and Engineering, Tokyo Institute of Technology			Location of Institution	Yokohama	
Title of Project	Research on the Effective Use of <i>a priori</i> Information in Image Interpretation					
Abstract of Research Project	For the accurate land-use and land-cover analysis of high resolution satellite and aerial images, as well as for automatic diagnosis and surgical planning based on medical images, we are aiming at establishing higher-order image segmentation and interpretation based on intelligent image analysis using <i>a priori</i> knowledge inherent to the subject under consideration. In particular for the first fiscal year, we experimentally and theoretically consider the use of <i>a priori</i> knowledge in the effective use of independent component analysis for resolving mixture pixels found in images observed beyond the limitation of physical resolution.					
References	<p>1. Naoko Kosaka and <u>Yukio Kosugi</u>: "ICA Aided Linear Spectral Mixture Analysis of Agricultural Remote Sensing Images," Proc . Fourth International Symposium on Independent Component Analysis and Blind Signal Separation, pp. 221-226 (2003 )</p> <p>2. <u>Yukio Kosugi</u>, Naoko Uemoto, Yuhei Hayashi and Bin He: Estimation of intra-cranial neural activities by means of regularized neural-network-based inversion techniques, Neurological Research, Vol.23, 435-446 (2001)</p>					
Term of Project	Fiscal years 2003-2007 . (5years)					
Budget Allocation (in thousand of yen)	FY2003	FY2004	FY2005	FY2006	FY2007	TOTAL
	13,700	9,700	9,900	8,000	6,900	48,200
Homepage Address	<a href="http://www-kosugi.pms.titech.ac.jp/">http://www-kosugi.pms.titech.ac.jp/</a>					