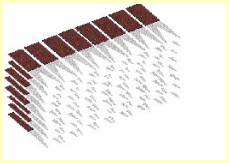
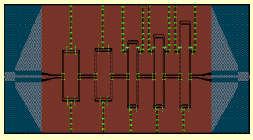
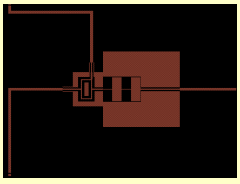
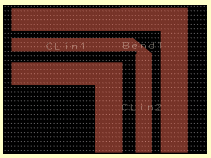
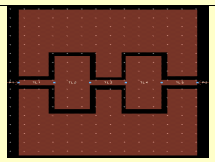
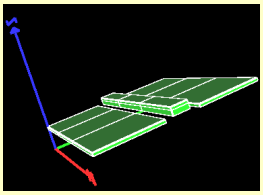
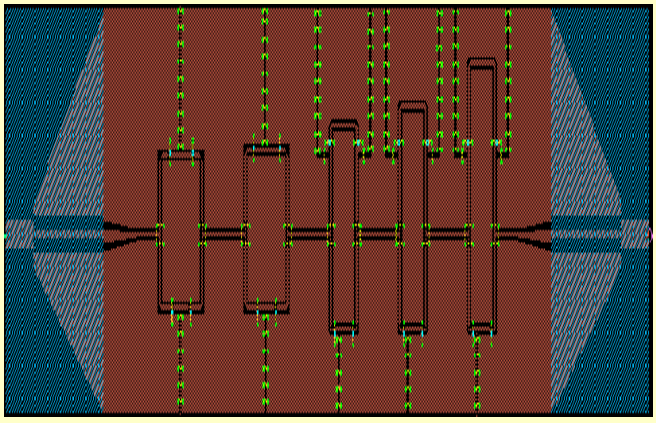
Sponsored Projects

S.No	Project Area	Sponsoring Agency	Description & Status	Out Come
1.	Prototype Fabrication of MEMTENNA	RCI, Hyderabad 2005-06	MEMTENNA is a MEMS Phase shifter based Phased Array Antenna which is used for Defense Applications. **ONGOING**	
2.	To Strengthen the post graduate Teaching and Research Facilities in the Department	FIST, DST 2005-06	To establish RF measurement facility up to 26.5 GHz for Post graduate students and research scholars. Spectrum analyzer (9 KHz to 26.5 GHz) to measure the power of RF circuits, system and antenna. **ONGOING**	
3.	Design and simulation of MEMTENNA	RCI, Hyderabad. 2005-06	To design a MEMS based phased array antenna. The design and simulation of the antenna was carried out using an EM simulator. **COMPLETED**	
4.	CAD of Ka band Mixers	DEAL, Dehradun 2002-2004	To develop the design data for Coplanar wave guide mixer, SPDT and SPST switches for receiver applications. **COMPLETED**	
5.	CAD of CPW Discontinuities	DRDL/RCI Hyderabad 1998-2000	Development of Coplanar wave guide Computer Aided Design data for discontinuities. **COMPLETED**	
6.	CAD of CPW Components	DRDL/RCI Hyderabad 1996-1998	Development of Computer Aided Design data for Coplanar wave guide components.	

			COMPLETED	
7.	Setting up of Microwave CAD Centre	AICTE, New Delhi 2001	Development of CAD facility – ADS software for RF system simulation, Ptolemy simulation. **COMPLETED**	
8.	CAD of ECPW Components -	AICTE, New Delhi 1997-2000	Development of Computer Aided Design data for Elevated Coplanar wave guide components. **COMPLETED**	
9.	Narrowband Noise Suppression in Electronic Instrumentation	DRDL, Hyderabad	Development of Wavelet based Signal Processing Algorithms for Noise Suppression **COMPLETED**	Software Package for Noise Suppression has been developed using MATLAB GUI
10.	Design, Analysis and Hardware Simulation of Digital beamforming Technique for improved Search and Track	Research Centre Imarat, Hyderabad	Development of Signal Processing Algorithms for Direction of Arrival and Target Detection **COMPLETED**	Maximum Likelihood Beamspace Processor (MLBP) based signal processing algorithm has been developed and implemented with ADSP 21065L SHARC Processor

On Going Sponsored Projects

Prototype Design and Development of MEMTENNA
M/s Research Centre Imarat, Hyderabad



5 Bit MEMS Phase Shifter

MEMTENNA is a MEMS Phase shifter based Phased Array Antenna which is used for Defense Applications. The Main task of the project is to design of and fabricate a five bit MEMS Phase shifter for Phased Array Applications. The individual phase shifters are designed separately and then integrated to form the five bit Phase shifter ($11.25^o/22.5^o/45^o/90^o/180^o$). The EM Performance of the phase shifter was carried using ADS2002C, the Electromechanical Analysis is carried out Using Intellisuite and Coventor ware MEMS CAD. The Designed Phase shifter is further customized for Semiconductor Complex Ltd. (SCL) Chandigarh for fabrication.