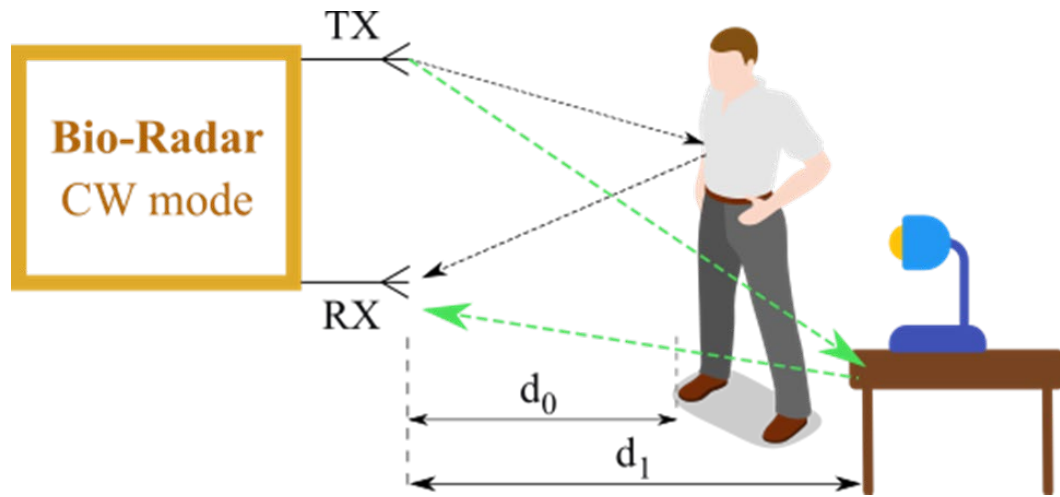


Antenna Design for the Bio-radar System



Real scenario

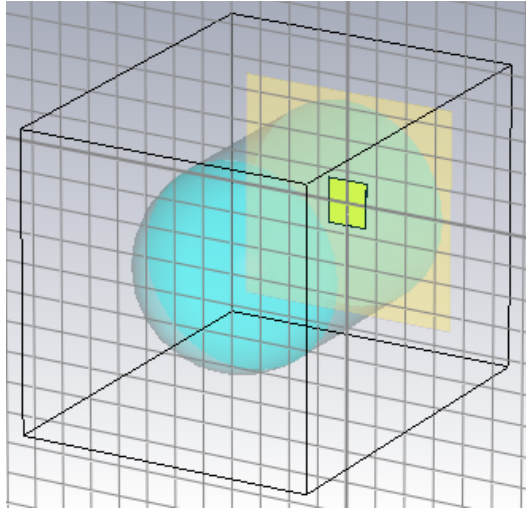


Problem

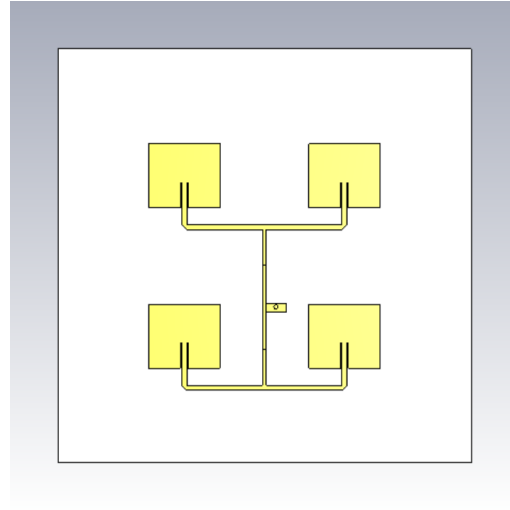


Solution

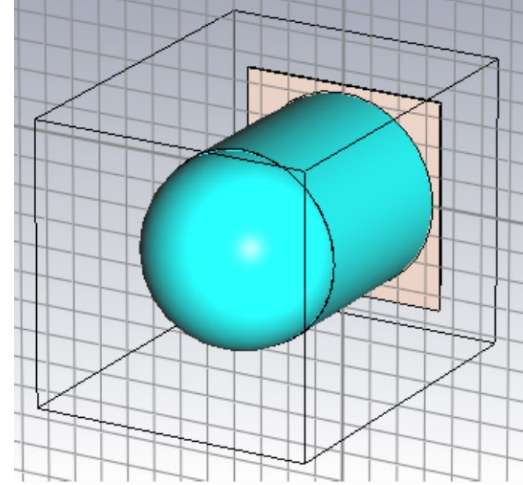
Lens implementation



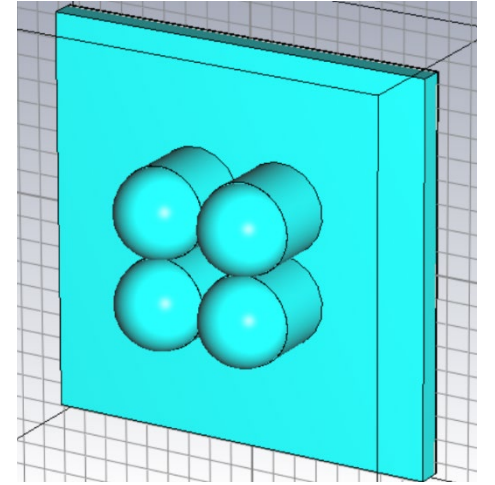
Single Patch + Lens



Array 2x2



Array + Lens



Array + Micro-lens Array

Results compilation

Antenna	Directivity [dBi]	Total Efficiency [%]	Gain [dBi]	HPBW [°]	SLL [dB]	Weight [kg]
Single Patch and Single Lens	14,65	78,69	13,61	26,30	-10,70	0,23
Microstrip Array	14,48	76,50	13,31	34,40	-15,30	----
Array and Single Lens ($L_D = 160$ mm)	17,60	61,36	15,40	16,70	-8,50	3,48
Micro-Lens Case A ($L_D = 65$ mm)	19,35	67,52	17,65	16,70	-11,80	0,97
Micro-Lens Case B ($L_D = 38,77$ mm)	14,46	69,73	12,89	25,50	-11,90	----

