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NUMERICAL ELECTROMAGNETICS CODE (nec2++)
Translated to 'C++' in Double Precision
Version 1.1.0 [2005-01-20]

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----- COMMENTS -----
Small square untuned loop
Extended thin wire kernel used
1. Free Space
2. Plane wave excitation

Owen Duffy (VK1OD)

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----- STRUCTURE SPECIFICATION -----
COORDINATES MUST BE INPUT IN
METERS OR BE SCALED TO METERS
BEFORE STRUCTURE INPUT IS ENDED

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WIRE No:	X1	Y1	Z1	X2	Y2	Z2	RADIUS	SEG No:	FIRST SEG	LAST SEG	TAG No:
1	-0.3000	0.0000	1.0000	-0.3000	0.0000	1.6000	0.0007	9	1	9	1
2	-0.3000	0.0000	1.6000	0.3000	0.0000	1.6000	0.0007	9	10	18	2
3	0.3000	0.0000	1.6000	0.3000	0.0000	1.0000	0.0007	9	19	27	3
4	0.3000	0.0000	1.0000	-0.3000	0.0000	1.0000	0.0007	9	28	36	4

GROUND PLANE SPECIFIED.  
WHERE WIRE ENDS TOUCH GROUND, CURRENT WILL BE INTERPOLATED TO IMAGE IN GROUND PLANE.

TOTAL SEGMENTS USED: 36    SEGMENTS IN A SYMMETRIC CELL: 36    SYMMETRY FLAG: 0

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----- SEGMENTATION DATA -----
COORDINATES IN METERS
I+ AND I- INDICATE THE SEGMENTS BEFORE AND AFTER I

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SEG No:	COORDINATES OF SEGM CENTER			SEGM LENGTH	ORIENTATION ANGLES		WIRE RADIUS	CONNECTION DATA			TAG NO:
	X	Y	Z		ALPHA	BETA		I-	I	I+	
1	-0.3000	0.0000	1.0333	0.0667	90.0000	0.0000	0.0007	36	1	2	1
2	-0.3000	0.0000	1.1000	0.0667	90.0000	0.0000	0.0007	1	2	3	1
3	-0.3000	0.0000	1.1667	0.0667	90.0000	0.0000	0.0007	2	3	4	1
4	-0.3000	0.0000	1.2333	0.0667	90.0000	0.0000	0.0007	3	4	5	1
5	-0.3000	0.0000	1.3000	0.0667	90.0000	0.0000	0.0007	4	5	6	1
6	-0.3000	0.0000	1.3667	0.0667	90.0000	0.0000	0.0007	5	6	7	1
7	-0.3000	0.0000	1.4333	0.0667	90.0000	0.0000	0.0007	6	7	8	1
8	-0.3000	0.0000	1.5000	0.0667	90.0000	0.0000	0.0007	7	8	9	1
9	-0.3000	0.0000	1.5667	0.0667	90.0000	0.0000	0.0007	8	9	10	1
10	-0.2667	0.0000	1.6000	0.0667	0.0000	0.0000	0.0007	9	10	11	2
11	-0.2000	0.0000	1.6000	0.0667	0.0000	0.0000	0.0007	10	11	12	2
12	-0.1333	0.0000	1.6000	0.0667	0.0000	0.0000	0.0007	11	12	13	2
13	-0.0667	0.0000	1.6000	0.0667	0.0000	0.0000	0.0007	12	13	14	2
14	-0.0000	0.0000	1.6000	0.0667	0.0000	0.0000	0.0007	13	14	15	2
15	0.0667	0.0000	1.6000	0.0667	0.0000	0.0000	0.0007	14	15	16	2
16	0.1333	0.0000	1.6000	0.0667	0.0000	0.0000	0.0007	15	16	17	2
17	0.2000	0.0000	1.6000	0.0667	0.0000	0.0000	0.0007	16	17	18	2
18	0.2667	0.0000	1.6000	0.0667	0.0000	0.0000	0.0007	17	18	19	2

19	0.3000	0.0000	1.5667	0.0667	-90.0000	0.0000	0.0007	18	19	20	3
20	0.3000	0.0000	1.5000	0.0667	-90.0000	0.0000	0.0007	19	20	21	3
21	0.3000	0.0000	1.4333	0.0667	-90.0000	0.0000	0.0007	20	21	22	3
22	0.3000	0.0000	1.3667	0.0667	-90.0000	0.0000	0.0007	21	22	23	3
23	0.3000	0.0000	1.3000	0.0667	-90.0000	0.0000	0.0007	22	23	24	3
24	0.3000	0.0000	1.2333	0.0667	-90.0000	0.0000	0.0007	23	24	25	3
25	0.3000	0.0000	1.1667	0.0667	-90.0000	0.0000	0.0007	24	25	26	3
26	0.3000	0.0000	1.1000	0.0667	-90.0000	0.0000	0.0007	25	26	27	3
27	0.3000	0.0000	1.0333	0.0667	-90.0000	0.0000	0.0007	26	27	28	3
28	0.2667	0.0000	1.0000	0.0667	0.0000	180.0000	0.0007	27	28	29	4
29	0.2000	0.0000	1.0000	0.0667	0.0000	180.0000	0.0007	28	29	30	4
30	0.1333	0.0000	1.0000	0.0667	0.0000	180.0000	0.0007	29	30	31	4
31	0.0667	0.0000	1.0000	0.0667	0.0000	180.0000	0.0007	30	31	32	4
32	0.0000	0.0000	1.0000	0.0667	0.0000	180.0000	0.0007	31	32	33	4
33	-0.0667	0.0000	1.0000	0.0667	0.0000	180.0000	0.0007	32	33	34	4
34	-0.1333	0.0000	1.0000	0.0667	0.0000	180.0000	0.0007	33	34	35	4
35	-0.2000	0.0000	1.0000	0.0667	0.0000	180.0000	0.0007	34	35	36	4
36	-0.2667	0.0000	1.0000	0.0667	0.0000	180.0000	0.0007	35	36	1	4

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***** DATA CARD NO. 1 EK 0 0 0 0 0.00000E+000 0.00000E+000 0.00000E+000 0.00000E+000 0.00000E+000 0.00000E+000
***** DATA CARD NO. 2 FR 0 1 0 0 7.10000E+000 0.00000E+000 0.00000E+000 0.00000E+000 0.00000E+000 0.00000E+000
***** DATA CARD NO. 3 EX 1 1 1 0 9.00000E+001 0.00000E+000 0.00000E+000 0.00000E+000 0.00000E+000 0.00000E+000
***** DATA CARD NO. 4 LD 5 0 0 0 5.70000E+007 0.00000E+000 0.00000E+000 0.00000E+000 0.00000E+000 0.00000E+000
***** DATA CARD NO. 5 LD 4 1 1 1 5.00000E+001 0.00000E+000 0.00000E+000 0.00000E+000 0.00000E+000 0.00000E+000
***** DATA CARD NO. 6 GN -1 0 0 0 0.00000E+000 0.00000E+000 0.00000E+000 0.00000E+000 0.00000E+000 0.00000E+000
***** DATA CARD NO. 7 XQ 0 0 0 0 0.00000E+000 0.00000E+000 0.00000E+000 0.00000E+000 0.00000E+000 0.00000E+000

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----- FREQUENCY -----
FREQUENCY= 7.1000E+000 MHZ
WAVELENGTH=4.2225E+001 METERS

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APPROXIMATE INTEGRATION EMPLOYED FOR SEGMENTS
THAT ARE MORE THAN 1.000 WAVELENGTHS APART
THE EXTENDED THIN WIRE KERNEL WILL BE USED

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----- STRUCTURE IMPEDANCE LOADING -----

LOCATION	RESISTANCE	INDUCTANCE	CAPACITANCE	IMPEDANCE (OHMS)	CONDUCTIVITY	CIRCUIT
ITAG FROM THRU	OHMS	HENRYS	FARADS	REAL IMAGINARY	MHOS/METER	TYPE
ALL					5.7000E+007	WIRE
1 1 1			5.0000E+001			FIXED IMPEDANCE NOTE, SOME OF THE ABOVE S

SEGMENTS HAVE BEEN LOADED TWICE - IMPEDANCES ADDED

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----- ANTENNA ENVIRONMENT -----
FREE SPACE

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----- MATRIX TIMING -----
FILL= 15 msec FACTOR: 0 msec

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----- EXCITATION -----

PLANE WAVE - THETA: 90.00 deg, PHI: 0.00 deg, ETA= 0.00 DEG, TYPE - LINEAR AXIAL RATIO: 0.000

----- CURRENTS AND LOCATION -----  
DISTANCES IN WAVELENGTHS

SEG No:	TAG No:	COORDINATES OF SEGM CENTER			SEGM LENGTH	CURRENT (AMPS)			
		X	Y	Z		REAL	IMAGINARY	MAGN	PHASE
1	1	-0.0071	0.0000	0.0245	0.00158	3.7501E-004	1.0307E-004	3.8892E-004	15.368
2	1	-0.0071	0.0000	0.0261	0.00158	3.7480E-004	9.7440E-005	3.8726E-004	14.573
3	1	-0.0071	0.0000	0.0276	0.00158	3.7462E-004	9.3569E-005	3.8613E-004	14.024
4	1	-0.0071	0.0000	0.0292	0.00158	3.7450E-004	9.1331E-005	3.8548E-004	13.705
5	1	-0.0071	0.0000	0.0308	0.00158	3.7443E-004	9.0715E-005	3.8526E-004	13.619
6	1	-0.0071	0.0000	0.0324	0.00158	3.7439E-004	9.1720E-005	3.8546E-004	13.765
7	1	-0.0071	0.0000	0.0339	0.00158	3.7441E-004	9.4353E-005	3.8611E-004	14.144
8	1	-0.0071	0.0000	0.0355	0.00158	3.7447E-004	9.8644E-005	3.8724E-004	14.758
9	1	-0.0071	0.0000	0.0371	0.00158	3.7457E-004	1.0466E-004	3.8892E-004	15.611
10	2	-0.0063	0.0000	0.0379	0.00158	3.7472E-004	1.1231E-004	3.9119E-004	16.685
11	2	-0.0047	0.0000	0.0379	0.00158	3.7484E-004	1.2013E-004	3.9362E-004	17.770
12	2	-0.0032	0.0000	0.0379	0.00158	3.7492E-004	1.2790E-004	3.9614E-004	18.836
13	2	-0.0016	0.0000	0.0379	0.00158	3.7497E-004	1.3562E-004	3.9874E-004	19.884
14	2	-0.0000	0.0000	0.0379	0.00158	3.7497E-004	1.4331E-004	4.0142E-004	20.917
15	2	0.0016	0.0000	0.0379	0.00158	3.7493E-004	1.5099E-004	4.0419E-004	21.936
16	2	0.0032	0.0000	0.0379	0.00158	3.7486E-004	1.5868E-004	4.0706E-004	22.943
17	2	0.0047	0.0000	0.0379	0.00158	3.7474E-004	1.6638E-004	4.1002E-004	23.940
18	2	0.0063	0.0000	0.0379	0.00158	3.7459E-004	1.7411E-004	4.1308E-004	24.929
19	3	0.0071	0.0000	0.0371	0.00158	3.7441E-004	1.8166E-004	4.1615E-004	25.882
20	3	0.0071	0.0000	0.0355	0.00158	3.7427E-004	1.8754E-004	4.1862E-004	26.615
21	3	0.0071	0.0000	0.0339	0.00158	3.7417E-004	1.9166E-004	4.2040E-004	27.123
22	3	0.0071	0.0000	0.0324	0.00158	3.7412E-004	1.9410E-004	4.2148E-004	27.421
23	3	0.0071	0.0000	0.0308	0.00158	3.7412E-004	1.9488E-004	4.2183E-004	27.515
24	3	0.0071	0.0000	0.0292	0.00158	3.7415E-004	1.9400E-004	4.2146E-004	27.407
25	3	0.0071	0.0000	0.0276	0.00158	3.7423E-004	1.9146E-004	4.2036E-004	27.096
26	3	0.0071	0.0000	0.0261	0.00158	3.7435E-004	1.8724E-004	4.1856E-004	26.573
27	3	0.0071	0.0000	0.0245	0.00158	3.7451E-004	1.8126E-004	4.1607E-004	25.827
28	4	0.0063	0.0000	0.0237	0.00158	3.7472E-004	1.7362E-004	4.1299E-004	24.860
29	4	0.0047	0.0000	0.0237	0.00158	3.7490E-004	1.6579E-004	4.0993E-004	23.856
30	4	0.0032	0.0000	0.0237	0.00158	3.7505E-004	1.5799E-004	4.0696E-004	22.843
31	4	0.0016	0.0000	0.0237	0.00158	3.7515E-004	1.5020E-004	4.0410E-004	21.820
32	4	0.0000	0.0000	0.0237	0.00158	3.7522E-004	1.4240E-004	4.0133E-004	20.783
33	4	-0.0016	0.0000	0.0237	0.00158	3.7525E-004	1.3459E-004	3.9865E-004	19.732
34	4	-0.0032	0.0000	0.0237	0.00158	3.7524E-004	1.2674E-004	3.9607E-004	18.663
35	4	-0.0047	0.0000	0.0237	0.00158	3.7520E-004	1.1884E-004	3.9357E-004	17.575
36	4	-0.0063	0.0000	0.0237	0.00158	3.7512E-004	1.1085E-004	3.9116E-004	16.462

\*\*\*\*\* DATA CARD NO. 8 EN 0 0 0 0 0.00000E+000 0.00000E+000 0.00000E+000 0.00000E+000 0.00000E+000 0.00000E+000

TOTAL RUN TIME: 15 msec