

Table 4.2. GPS measurement selection, navigation accuracy, and algorithm development — Problem 2

	Orion GNSS Toolbox 2.05		Constell Constellation Toolbox 3.02		GPSSoft SatNav Toolbox v. Feb 98		Navsys GPS Signal Simulation Toolbox	
Meas Select Tools								
DOPs	Y	WD	S-TM	Y	WD	S-TM	Y	Y
Nav Fix Tools								
Point pos & time	Y	WD	S-TM	Y	WD	S-TM	Y	S-TM
Point vel & drift	Y	WD	S-TM	Y	WD	S-TM	Y	S-TM
Scalar LADGPS	Y		S-TM	Y		S-TM	Y	S-TM
Carrier-phase smooth							Y	
Single-diff CDGPS	Y			Y			Y	
Doubl-diff CDGPS	Y			Y			Y	S
K.F. PV PVT model							Y	S-TM*
Note: Subcategories that no vendors currently support but are of interest to the community include weighted DOP; robust DOP; vector WADGPS; attitude fix; carrier phase K.F. PV; and K.F.+sensors.								
* available on request								

Table 4.3. Fault monitoring — Problem 3

	Orion GNSS Toolbox 2.05		Constell Constellation Toolbox 3.02		GPSSoft SatNav Toolbox v. Feb 98		Navsys GPS Signal Simulation Toolbox	
Post Fix								
Point RAIM							Y	
WADGPS Coverage	Y	WD		Y	WD			
CEP, drms, . . .								

Table 4.4. Reading recorded data — Problem 4

	Orion GNSS Toolbox 2.05		Constell Constellation Toolbox 3.02		GPSSoft SatNav Toolbox v. Feb 98		Navsys GPS Signal Simulation Toolbox	
Data Interchange								
NMEA	Y	WD	S-TM	Y	WD	S-TM		
Note: Neither RINEX nor any other data interchange format functions were supplied with any of the packages.								

Table 4.5. Total GPS receiver RF, digital signal processing, navigation, and modeling simulation — Problem 5

	Orion GNSS Toolbox 2.05		Constell Constellation Toolbox 3.02		GPSSoft SatNav Toolbox v. Feb 98		Navsys GPS Signal Simulation Toolbox	
Receiver Simulation								
Exact C/A I/Q							Y	WD S
Tracking loops								
DLL							Y	S
PLL,FLL							Y	S
SNR							Y	S
Lock detector							Y	S
Generate C/A						Y	Y	
Generate C/A corr						Y	Y	
Predict ROC							Y	
Note: Subcategories that no vendors currently support but are of interest to the community include rule of thumb; linear 2kHz I/Q; analytical quant; analytical AGC; exact P I/Q; tracking loops — bit sync, frame sync; variable I/D; tracking moding; search; receiver management; and n channels.								

Table 4.6. Presentation quality graphics — Problem 6

	Orion GNSS Toolbox 2.05		Constell Constellation Toolbox 3.02		GPSSoft SatNav Toolbox v. Feb 98		Navsys GPS Signal Simulation Toolbox	
Presentation								
Basic	Y			Y				Y
Mercator	Y	WD	S	Y	WD	S		
Quality	Y	WD		Y	WD			Y
Interactive scale								
Note: Subcategories that no vendors currently support but are of interest to the community include gaps, chunking, and prune points. Other categories of interest include simulator utilities (subframe databits and trajectory), pseudolites, and jamming models.								