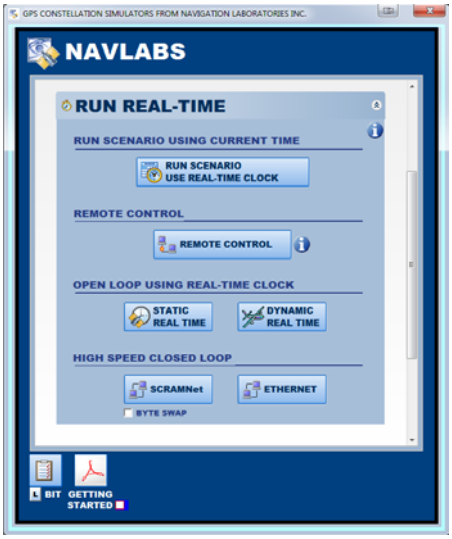
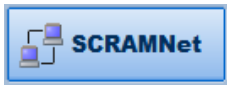
USING TAPESTRY IN REAL - TIME



Based upon the TIME-OF-DAY CLOCK, the Tapestry Constellation Simulator can be operated in one of four configurations: Scenario Based, Closed Loop, Remote Control, and Open Loop.

In **Scenario Based Configuration**, select a SCENARIO and Run it using the REAL-TIME simulator clock. This provides an effective way to keep a Scenario "up to date". Use this mode if you do not want the receiver-under-test to go back-in-time.



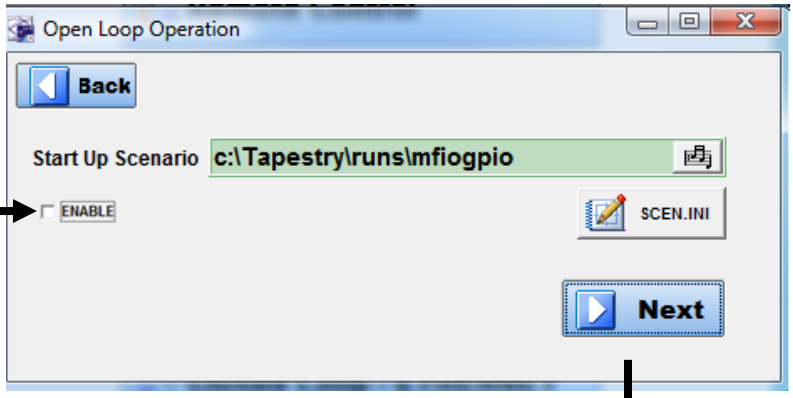
In **Closed Loop configuration**, an external process generates the Vehicle Motion via a High Speed Data Buss such as Ethernet, or SCRAMNet. In this mode precise timing relationships between the Tapestry and external process are maintained. See the Users Guide for the Closed Loop Operation for a description of this operational configuration.

In **Remote Controlled configuration**, the user can operate the simulator remotely via RS232, or Ethernet. File based scenario's can be run remotely, or a LOCAL mode is provided STATIC fixed position ou that replicates the Open Loop configuration via the specified data buss and the command script.

In **Open Loop configuration**, The Tapestry Real-Time-Clock is used to generate either tput or a 6DOF Dynamic Output. These Open Loop modes are similar to Closed Loop with the distinction being Tapestry generates the motion trajectory rather than an external process.

OPEN LOOP - UNATTENDED: Continual RF output. The simulator outputs RF based upon the Initial Time and LLA specified in the **Start up** Scenario or Manual entry, with Time based upon real-time initialized from the PC clock.

When you click, the Simulator will display the configuration screen (shown).You may enter any values and click OK to initiate a Static Scenario that can run continuously for up to 48 hours



Must Enable

TAPESTRY.INI
(Open Loop Settings)

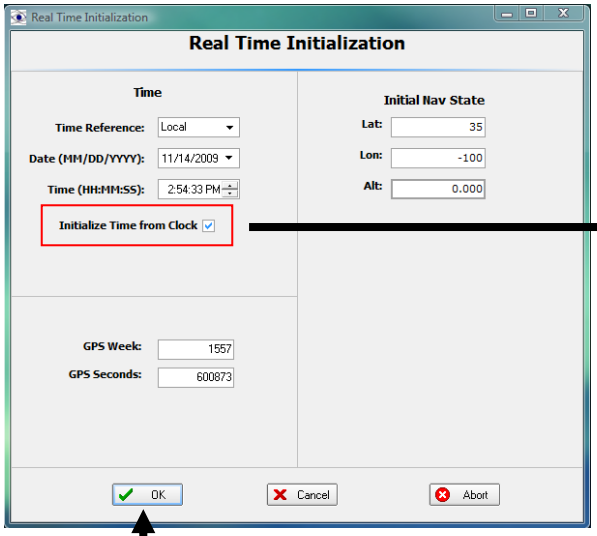
[Defaults]
OpenLoopStartupScenario = As Specified

SCEN.INI
(Open Loop Settings)

[INTERFACE]

Gpib	= 0
Serial	= 0
Ethernet	= 0
Scramnet	= 0
SharedMemory	= 0
ScramnetIec	= 0
SharedMemoryIec	= 0

[CONTROL]
Local = 1



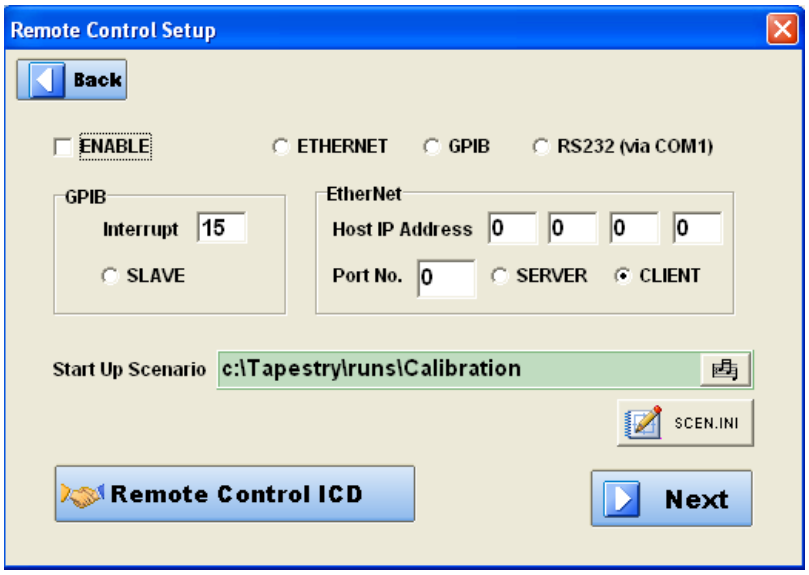
Select to use the time from the PC clock. Otherwise the entered time applies.

VOYAGER.INI
(local mode settings)

[TAPPTINIT]
InitFromClock=1
Date=11/14/2009
Time=2:54:33 PM
Lat= 35.0000000
Lon=-100.0000000
Alt= 0.0000000
RefLocalTime=0

Select and RF output will commence. The Simulator will automatically update the Ephemeris and perform data set cutins. No user interaction is required.

REMOTE CONTROL: The simulator can be controlled via RS232 / Ethernet in a remote control configuration. The user selects one of the pre-existing scenarios for RF output.. The user may adjust the Power via the Remote Control Interface Script defined in the ICD.



TAPESTRY.INI (Remote control Settings)

[Defaults]
RemoteControlStartupScenario = As Specified

SCEN.INI (Remote control Settings)

[INTERFACE]
Gpib = As Specified [0/1]
Serial = As Specified [0/1]
Ethernet = As Specified [0/1]
Scramnet = 0
SharedMemory = 0
ScramnetIec = 0
SharedMemoryIec = 0

[CONTROL]
Local = 0

TAPRCI.INI (Remote control Settings)

[INTERFACE]
Gpib = As Specified [0/1]
GpibTimeOut = T100ms
Serial = As Specified [0/1]
Ethernet = As Specified [0/1]

[MSGCONTROL]
AckEvery = 1

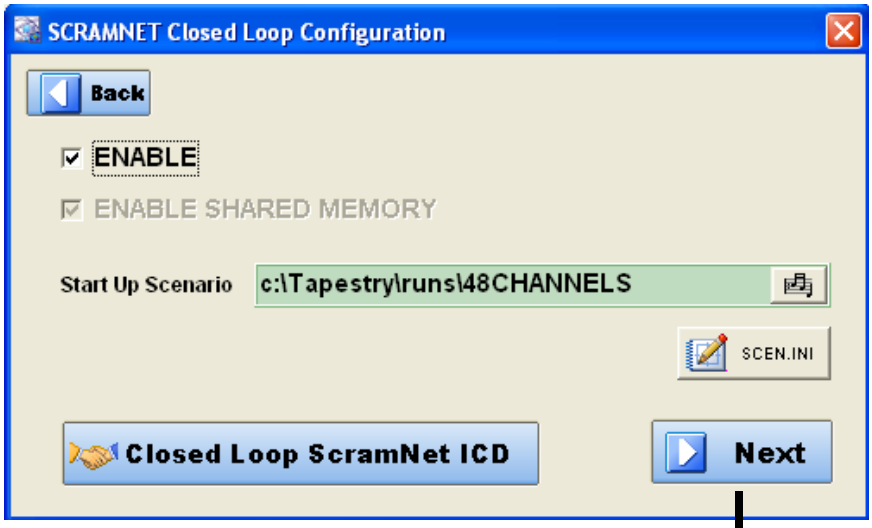
VOYAGER.INI (Remote Control Settings)

[Default]
RunsRemote = ExampleRemote

[ETHERNET]
Server = As Specified [0/1]
HostAddress = As Specified [0/1]
PortNum = As Specified [0/1]

[GPIB]
Slave = As Specified [**1**]
Interrupt = As Specified [**15**]
PrimaryDeviceAddress = **15**
SecondaryDeviceAddress = **0**
BoardIndex = **0**
WriteError = **0**
StartDelay = **15**
Controller = **1**
TimeOut = **T100ms**

CLOSED LOOP [SCRAMNET]: Closed Loop is a time-critical operation. Real-time RF output is controlled by Vehicle Motion Data supplied by way of a high speed SCRAMNET bus. Time Tagged data is supplied from 10-100 Hz from a controlling computer. Click this link to open the Interface Control Document.



TAPESTRY.INI (Remote control Settings)

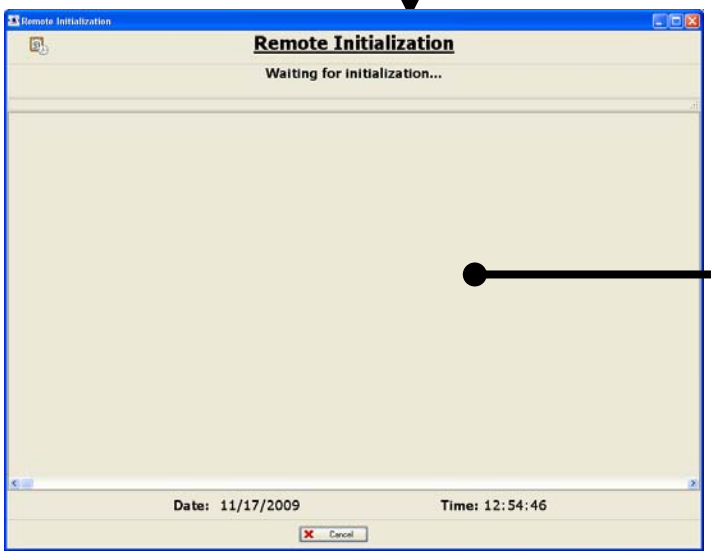
[Defaults]
ClosedLoopScramnetScenario = As Specified

SCEN.INI (Remote control Settings)

[INTERFACE]

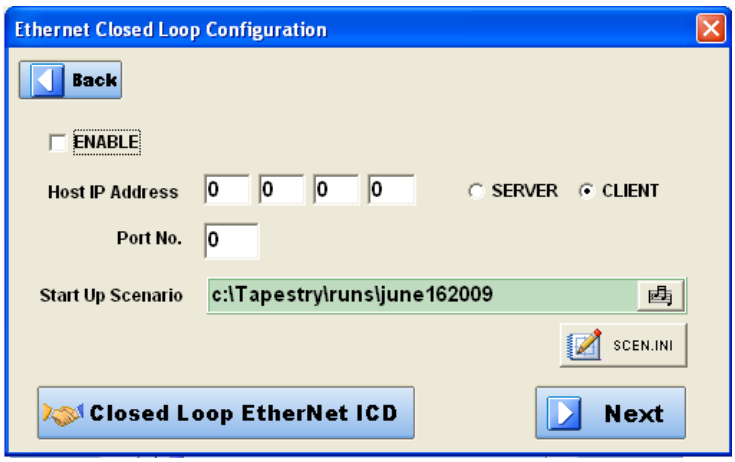
Gpib	= 0
Serial	= 0
Ethernet	= 0
Scramnet	= 0
SharedMemory	= 0
ScramnetIec	= 1
SharedMemoryIec	= 1

[CONTROL]
Local = 0



This screen denotes that the real-time kernel is waiting for Closed Loop Initialization data before the RF Output is produced.

CLOSED LOOP [ETHERNET]: Closed Loop is a time-critical operation. Real-time RF output is controlled by vehicle trajectory data supplied by way of a high speed ETHERNET bus. Time Tagged data is supplied from 10-100 Hz from a controlling computer. Note that the Ethernet format is NOT the same as Scramnet. See this link for details.



TAPESTRY.INI (Remote control Settings)

[Defaults]
ClosedLoopScramnetScenario = As Specified

SCEN.INI (Remote control Settings)

[INTERFACE]

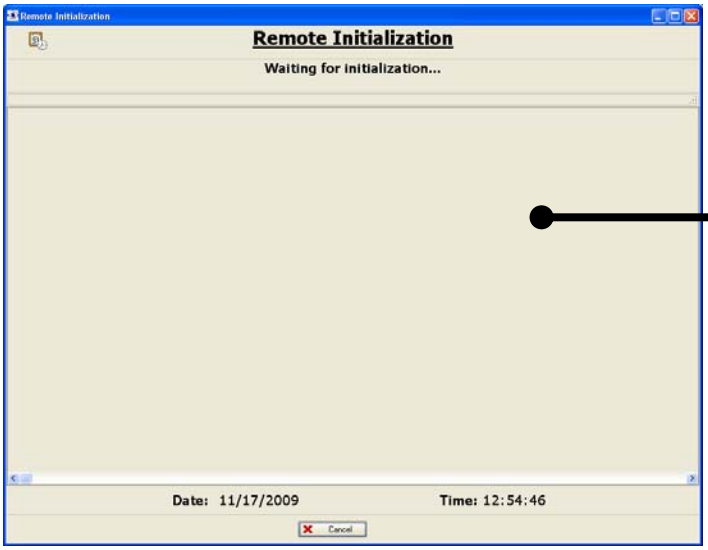
Gpib	= 0
Serial	= 0
Ethernet	= 1
Scramnet	= 0
SharedMemory	= 0
ScramnetIec	= 0
SharedMemoryIec	= 0

[CONTROL]
Local = 0

VOYAGER.INI (Remote Control Settings)

[ETHERNET]

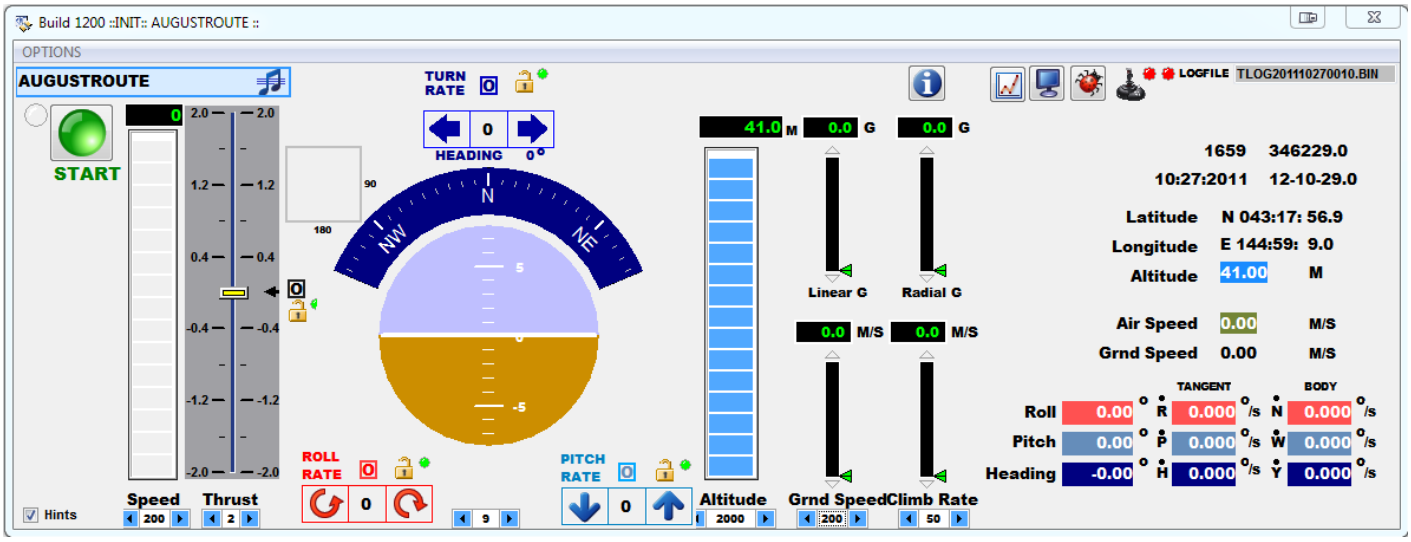
Server	= As Specified [0/1]
HostAddress	= As Specified [0/1]
PortNum	= As Specified [0/1]



This screen denotes that the real-time kernel is waiting for Closed Loop Initialization data before the RF Output is produced.

OPEN LOOP - DYANMIC : Continual RF output. The simulator outputs RF based upon the Initial Time and LLA specified in the **Start up** Scenario or can be based upon real-time by reading the PC clock.

When you click, the Simulator will display the COCKPIT which allows for a full 6 Degree of Freedom motion using either the Mouse or a USB-JOYSTICK



Use this link to learn more about the COCKPIT Open Loop Mode.

TAPESTRY.INI
(Open Loop Settings)

[Defaults]
OpenLoopStartupScenario = As Specified

SCEN.INI
(Joystick Open Loop Settings)

[INTERFACE]

Gpib	= 0
Serial	= 0
Ethernet	= 0
Scramnet	= 0
SharedMemory	= 0
ScramnetIec	= 0
SharedMemoryIec	= 1

[CONTROL]
Local = 0