## Configuring MMCE for "The Utah Reference Network" (TURN)

By: Mark Silver Date: May 2, 2007

0. Get TURN credentials from: http://www.turngps.utah.gov

#### THE FIRST CONNECTION IS DIFFICULT, Subsequent connections will be simpler!

1. Double-click on the "Shortcut to BthManager" on the CE Desktop:



Wait for Bluetooth Manager to load. It takes a while:



## The "Bluetooth Manager" will be shown:



Click on the green-framed clipboard with the red checkmark.

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Properties OK ×
General Security Options
Name : MobileMapper CE
Address : 00:00:00:00:5a:a
Class : UNKNOWN
Ready MohileManner (F
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Select the "Security" tab and configure these settings:



Select the "Options" tab and configure these settings:

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Properties	ОК	×
General Security Options		
Start minimized		
🔽 Auto Client COM Port		
Auto Server COM Port		
	_	
Ready Mobile	Mapp	oer CE
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Press the OK button (upper-right) to return to the Bluetooth Manager.

IMPORTANT: Set your cell phone's Bluetooth to ON and DISCOVERABLE (or FIND ME). On a Motorola phone: "Center Button: Settings: Connection: Bluetooth Link: Setup" Set "Power: On", then click on "Find Me". A message about "Discoverable for 60 Seconds" will be displayed.

Click on the flashlight on the Bluetooth Manager toolbar, wait until your phone is shown:

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ZMAX2007	Msilver	
Ready		
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Click and hold on the cell-phone until the "Properties, Pair, Update" menu is shown:

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ZMAX2007	v <sub>ls</sub> Properties
	Pair
	Update
r Ready	
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Click on "Pair":

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ZMAX	2007	Msilver		
	Pair Msil	ver	×	
	Pin :			
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l Ready	1			
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Enter a clever Pin. The Pin should be numeric, then press OK, your cell phone will ask for the pin, then show "verifying pin". If you typed the PIN correctly, your phone will display a message like "PIN verified and saved". If you don't type the PIN correctly, click and hold on the phone icon and try again.

A yellow lock will appear next to the phone icon on the Mobile Mapper CE:

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ZMAX2	2007	Msilver		
Ready				
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Double-click on the phone icon.

After a few seconds of 'searching' a screen similar to this one will be shown:

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File Transfer	Object Push	Dial-Up Networking
Deset.		Mailuan
Ready	<b>.</b>	Misiver
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Double-click on the "Dial-Up Networking" icon, wait for a screen like this one:

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	6	31
File Transfer	Object Push	Dial-Up Networking
BthManag	ger onnection succ ommunication (	OK ceeded on port COM4:
Ready		Msilver
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Click on OK, then click-and-hold on "Dial-Up Networking":



Click on "Create Shortcut", wait for a confirmation box:

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File 1	Fransfer	Obje	ect Pusł	n I Ne	Dial-Up tworki	ng
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Click on OK, then click on the X in the upper-right corner to close (hide) the Bluetooth Manger.

2. Configure Dial-Up-Networking.

Click on the "Start" menu (the flag in the lower left corner):

My Computer Computer Recycle Bin	
🛅 Programs	
☆ F <u>a</u> vorites	apper <sup>™</sup> CE
Documents	GENERATION
🕑 <u>S</u> ettings	•
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) Suspend	
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Click on Settings > Network and Dial-Up Connections:

My Computer	
Recycle Bin	
n Programs	
☆ F <u>a</u> vorites	apper™CE
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Suspend	
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Wait for the "Connection" menu:





Double-click on "Make New Connection"



Name the connection "TURN", choose Dial-Up Connection and press "Next>" Choose the "BT Modem on XXXXX on COMX:" selection:

	Device Prop
Modem	Port Setting:
🕺 TURN	Connection
- <u>to</u>	<u>B</u> aud Rate
Select a modem:	Data Bits:
Hayes Compatible on COM1:	Parity:
BT Modem on Msilver COM4: Haves Compatible on COM1:	<u>S</u> top Bits:
	Elow Cont
	Terminal —
Security Settings	Use tern
	Use tern
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Connection 🗒 🗙 🖙 字 🗙	Set the "Call
Connection E. X E. ? X Modem X	Set the "Call Device Prop
Connection E X R ? X Modem X J TURN	Set the "Call Device Prop Port Setting
Connection E. X R ? X Modem X TURN	Set the "Call Device Prop Port Setting Call Setup –
Connection     Image: Select a modem:	Set the "Call Device Prop Port Setting Call Setup –
Connection       Image: Select a modem:         BT Modem on Msilver COM4:       Image: Select a modem	Set the "Call Device Prop Port Setting Call Setup – Cancel th within
Connection       Image: Connection         Modem       X         Image: Configure Con	Set the "Call Device Prop Port Setting: Call Setup – Cancel th within 120 Set
Connection Connection Connection Connection Configure	Set the "Call Device Prop Port Setting: Call Setup – Cancel th within 120 set Wait for
Connection Connection Connection Connection Configure	Set the "Call Device Prop Port Setting: Call Setup – Call Setup – Cancel th within 120 set Wait for Wait for
Connection   Modem   TURN   Select a modem:   BT Modem on Msilver COM4:   Configure   TCP/IP Settings   Security Settings	Set the "Call Device Prop Port Setting: Call Setup → Call Setup → Cancel th within 120 set Wait for Wait for Extra Settin
Connection   Modem   TURN   Select a modem:   T Modem on Msilver COM4:   Configure   TCP/IP Settings   Security Settings   < Back	Set the "Call Device Prop Port Setting Call Setup — ✓ Cancel th within 120 se ✓ Wait for Wait for Extra Settin Special mod inserted into
Connection   Modem   TURN   Select a modem:   BT Modem on Msilver COM4:   Configure   TCP/IP Settings   Security Settings   < Back   Next >	Set the "Call Device Prop Port Setting: Call Setup → Cancel th within 120 se Wait for Wait for Extra Settin Special mod inserted into
Connection Connection Connection Connection Configure Co	Set the "Call Device Prop Port Setting Call Setup → Call Setup → Cancel th within 120 set Wait for Wait for Extra Settin Special mod inserted into

Click on "Configure...":

Set the "Port Settings" to match these:



Set the "Call Options" to match these:

Device Properties ? OK ×
Port Settings Call Options
Cancel the call if not connected within
120 seconds
☑ <u>W</u> ait for dial tone before dialing
Wait for credit card Osec.
Extra Settings ————
Special modem commands may be inserted into the dial string
🐉 Device P 🚯 🕲 > 9:53 PM 🏓 👼

Click OK to return to the main "Modem" screen. Don't mess with "TCP/IP Settings..." or "Security Settings..." the defaults are just fine.

Press the "Next" button:

Set the "Phone Number" to "\*99#" as shown, don't worry about the "Country/region code" and "Area Code":

Connection	? ×
Country/region code:	1
Area code:	425
Phone number:	
*99#	
Force long distance	
< <u>B</u> ack	Finish
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Press "Finish" to return to the "Connection" menu.

Highlight the "TURN" icon and press the "Two Computers" button:

Connection	1. ×	( 😭	? ×
<b>S</b>		5	
Make New Connection	TURN	USB	Cable
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Set the "User Name:" to <u>WAP@CINGULARGPRS.COM</u> Set the "Password:" to CINGULAR1 Set the "Domain:" to wap.cingular

Check the "Save Password" checkbox:

Connection Dial-Up Conne	ection X
2 <u>]</u> π	JRN
User Name:	CINGULARGPRS.COM
Password:	*****
Domain:	wap.cingular
	Save password
Phone:	9,*99#
Dial from:	Work
Connect	Dial Properties
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Now press the "Dial Properties..." box:

Connection 🗄 🗙 🐼 🤈 🗙		
Dialing Pro	perties	? OK ×
Location:	Work	•
	New	Remove
Local settin	gsare: —	
Area c	ode: 425 🛛 🌘	🖲 Tone dialing
Country/Reg	gion: 1 🛛 🕻	🔵 Pulse dialing
🗌 Disable d	all waiting; c	dial: 🔽 🔻
Dialing patt Local / Lon 9,G 9,1FG 9,011,FEG	erns are: - g Distance / Ir	nternational:
5,011,610		Edit
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Click on the "Edit..." button:

Connectio	n 🗄 🗙 🛛	🔊 🤈 🗙
Dialing Pro	perties	? OK ×
Location:	Work	•
Edit Dialin	g Patterns	? 0K ×
For Local c	alls, dial:	
9,G		
For Long D	istance calls, dia	al:
9,1FG		
For Interna	ational calls, dial:	:
9,011,EFG	i	
(E,e = cou co	untry/region cod ode; G,g = num	de; F,f = area nber)
		Edit
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Set all three boxes to "G" as shown below:

Connection 🚊 🗙 🛛	<u>ମ ୨ ୪</u>
Dialing Properties	? 0K ×
Location: Work	•
Edit Dialing Patterns	? OK ×
For Local calls, dial: G	
For Long Distance calls, dia G	al:
For International calls, dial:	
d	
(E,e = country/region cod code; G,g = num	le; F,f = area Iber)
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Press OK:

Connectio	n 🗄 🗙	🔊 🤊 🗙
Dialing Pro	perties	? 0K ×
Location:	Work	•
	New	Remove
Local settin	gsare: —	
Area c	ode: 425 🛛 🌘	🕽 Tone dialing
Country/Reg	gion: 1 🛛 🤇	) Pulse dialing
🗌 Disable d	all waiting; c	tial: 🔽 👻
Dialing patt Local / Lon	erns are: g Distance / Ir	nternational:
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G		
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## Press OK:



Press "Connect"

Connection	$\frac{a}{1.6} \times 1$	?	×
<b>S</b>	<u>.</u>	-	
Make New Connection	TURN	USB Cable	
Connecting to	TURN		
🛃 Open	ing Port		
Hide this messa	ige:	Hide	
Cancel connect	ion:	Cancel	
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·   <u> </u>	~	· ·	
Connection	≞ 1.8 × [	?	×
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Make New Connection	TURN	USB Cable	
Connecting to	TURN		
🧞 User /	Authentica	ated	
Hide this messa	ige:	Hide	
Cancel connect	ion:	Cancel	
			-
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Your phone will say "GPRS Active". You can press the "Hide" button to hide the message. Then press the X in the upper-right corner to close the "Connection Manager". Your MMCE is now connected to the internet.

You can prove this by starting the Explorer (Start: Programs: Windows Explorer):



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Addres	s My Con	nputer	•
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Windov	vs C	ontrol <sup>D</sup> anel	
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Type <u>www.google.com</u> into the "Address" field:

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Address	/ww.goog	le.com		•
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Application Data	My Docume	ents	MyDevice	
		7	$\triangleright$	
Network	Program	Files	Temp	
0 Windows	Contri Pane	ol !		
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#### then press the "Enter" key:



Google should be displayed, just like on a PC.

Close the Windows Explorer, then click on "Start: Programs: GPS Utilities: DGPS Configuration":



Wait for the "DGPS Configuration" tool to load:

DGPS Config	juration	? OK ×
rStatus —		
Mode:	SBAS	
Station:	N/A	
Port Used:	N/A	
	Select Mod	e
1		
	OK	
DGPS C	. 🎼 🚺 10	:09 PM 🏸 🔁

Press "Select Mode": Choose "NTRIP"

then press OK. MMCE will complain that "No NTripCaster specified"

DGPS Configu	iration	? 0K ×			
_Status					
Mode:	SBAS				
Station:	N/A				
Port Used:	N/A				
No NtripCaster specified					
	ОК				
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Click on OK:

NTRIP Settings	NTRIP Settings						
NtripCaster							
Network:	<b>v</b>						
Station:	~						
Distance							
Find Nearest	More Details						
Real-Time Correction /	Real-Time Correction Age Limit						
2 minutes							
ОК	Cancel						
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Click on "NtripCaster":

NtripCaster Connection						
NTRIP Co	nfigurat	Add				
11101						
<u></u>						
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Click on "Add" and fill in the blanks:

IP Configuration	×
Name	
TURN	
Host	
168.179.231.6	
Port	
2101	
Login	
marks0011	
Password	
****	
ОК	Cancel
	▶ 10:30 PM ጆ 🗟

Press OK:

NtripCaster Connection						
NTRIP Config	juration					
TURN	-					
Edit	Delete					
ОК	Cancel					
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Press OK, choose your mount point:

NTRIP Settings	NTRIP Settings					
Ntrip	Taster					
Network: AGRC	-					
Station: SLC_RT	CM23/SLC_RTCI 👻					
Distance N/A	Not VRS					
Find Nearest More Details						
Real-Time Correction Age Limit						
12 minutes	•					
OK Cancel						
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# Press OK:

DGPS Configu	uration 🔨 ? OK 🗙					
rStatus —						
Mode:	NTRIP					
Station:	SLC_RTCM23/SLC_R1					
Port Used:	N/A					
S	Select Mode					
Settings						
Connect						
No D	Data Reception					
	ОК					
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Finally (yes we are almost done), click on "Connect".

If all is well, after a few moment the status box will show an increasing character count:

DGPS Configu	uration 🛛 ? OK 🗙				
rStatus —					
Mode:	NTRIP				
Station:	SLC_RTCM23/SLC_R1				
Port Used:	N/A				
Select Mode					
Settings					
Disconnect					
Received 4709 Data Packets					
OK					
	🖢 🚯 10:33 PM 🏓 🖷				

Click OK. MMCE will show confirmation message:

- <b>I</b>	
Computer	
1	
Recycle Bin	
DGPS Configuration OK	
FAX Processing incoming data packets	
	-
Shortcut to BthManager	
🦹 🛛 DGP 🖢 🚷 10:34 PM 🏓	۳.

### Press OK.

You can check your differential correction by selecting "Start: Programs: GPS Utilities: GPS Status" if all is well, the lower left corner will show "Differential GPS":

<u>File Tools H</u> elp ×											
Sig/Nav Azmth/Elvn Panel Stats											
41	37	38	34	35	38						
8	28	19	27	29	26	11	13	17	25	10	3
Position Latitude: N 40° 44.15286 Longitude: W 111° 49.42774 Altitude: 4724.44 ft Satellites In Use: 6 Satellites In View: 12											
Dif	fere	ntia	I GF	PS	)	3		lo L	.og		0
*		<mark>i</mark> GI	95	1		8	10	:38	PM	7	5

Restarting Connection

- 1. Turn on MMCE.
- 2. Start Bluetooth Manager:



Click on the yellow star:

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3	<u>,</u>	$\langle \rangle$		
Dia Netw	al-Up s orkin or	Serial Port n COM 4		
Ready	,			
27 🛛	👌 BthM	0∮ 🎭 ▶ 10	:46 PM	🏓 🔁

Double-click on "Dial-Up Networking":

80 🖬 🛠 🖉 📴 🖇 🗡
31
Dial-Up Networking
networking
BthManager OK
Connection succeeded on communication port COM4:
Ready Msilver
🌮 🚯 Bthm 💕 🅪 10:48 PM 🏓 🖶

Click OK:



Click on X in upper-right corner:

Click on "Start: Settings: Network and Dial-Up Connections:







#### Double-click on TURN:

Connection 🖳 🗙 🕅 🤉 🗙 Dial-Up Connection 🛛 🗙		
2] TU	IRN	
User Name:	WAP@CINGULARGPR	
Password:	*****	
Domain:	wap.cingular	
	Save password	
Phone:	*99#	
Dial from:	Work	
Connect	Dial Properties	
Con.	0 <b>7 🗫 10-50 pm 🜌 🚍</b>	

Click on "Connect":

Wait a bit, your phone will show "GPRS Connected", hide the Connected window on the MMCE:



Click on the X in upper-right corner: Click on "Start: Programs: GPS Utilites: DGPS Configuration":



Click on "Connect".

The status line should show increasing data packets.