

EMERGENCY COMMUNICATIONS USING WINLINK AND A MOBILE PHONE

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Introduction:

Using a mobile phone to send and receive text messages is an excellent Emergency Communications (EMCOMM) technique. This is NOT regular email, but a short message addressed to a mobile phone. The sender can use an e-mail account, or another mobile phone. Text messages take much less bandwidth than audio or video connections, and are more likely to get through if there is any bandwidth available. Further, you can exchange text messages between a Winlink station and a mobile phone, an important option if commercial communications are down or unreliable.

You have two options for sending and receiving data messages using mobile phones:

- Short Message Service (SMS) is limited to sending and receiving messages of up to 160 characters.
- Multimedia Messaging Service (MMS) extends the core SMS capability to allow sending photographs, video, text messages over 160 characters, and other data. There is no standard limit in size of MMS messages and instead constraints are set by the carrier and phone manufacturer.

All smart phones, and most older mobile phones, can send and receive SMS text messages. MMS may not be available in older models. Hence, using SMS for EMCOMM is the better approach, so **this paper is written for text messaging between Winlink and SMS**. However, this process can be used by other email clients for either SMS or MMS. You should think of it as another tool in your EMCOMM tool kit, for you, your family, and your fellow hams.

Instructions:

1. Create a new email on Winlink as you would normally. Instead of entering the callsign or email address in the recipient box, insert the 10 digit phone number of the mobile phone you're trying to reach. Some carriers might require the use of 11 digits (see the Text Messaging Address Table); this paper uses 10 digits for simplicity.
2. Once entered, tack on the appropriate "@domain" behind it:
 - a. Determine the intended recipient's cellular carrier by either asking them who their provider is, or by looking it up at www.freecarrierlookup.com (note that you are limited to 30 free searches in a 30 day period). Ideally, you have done this ahead of time, and have it stored in your contact list. If not, do your best.
 - b. Find the SMS text messaging domain as shown in the Text Messaging Address Table at the end of this paper, and add it to the 10 digit phone number. Some carriers have SMS and MMS specific domains. This is the "@domain".
 - c. The complete address looks like this: TenDigitPhoneNumber@domain
3. Compose your email.
 - a. Brevity and clarity are good practices for EMCOMM. Keep the message short and to the point. Remember that you are limited to 160 characters for SMS!

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- b. All words in your subject line will become the first words that show up in the text message.
 - c. Attachments are not accepted by SMS, so don't add any (maybe later, when things are calmer).
 - d. Once you are finished composing the message, send it through the desired Winlink gateway.
4. Your text message to the recipient needs to get through their spam filter. Send multiple messages to make sure this works.

Test... Troubleshoot... Confirm.... Practice!

5. Their text message (reply) back to you needs to get through your Spam Filter [WL2K] "Whitelist".
- a. Sometimes the "From" domain gets changed from the one you sent To. Send multiple messages to make sure this works.
 - b. You might consider including in your Whitelist the domains of the major cell service providers (such as txt.att.net, mms.att.net, vtext.com, vzwpx.com. See Winlink FAQ Q675).

Test... Troubleshoot... Confirm.... Practice! See Winlink FAQ Q750.

6. Once you get your Whitelist "smart", a mobile phone user can successfully initiate a Text message to your Winlink email address.

Recommended practices:

1. Store TenDigitPhoneNumber@domain in your mobile phone for each person to which you might ever want to send a text message during an emergency.
2. Offer friends and family your Winlink address for emergency messaging, and have them store that address in their mobile phone.
3. A List of cellular provider domain's ("@domain") should be kept on your Winlink laptop. Version 1.6.1 of the National Interoperability Field Operations Guide (NIFOG), available as PDF or as a pocket-sized hardcopy, has such a list (reproduced at the end of this document). Pages 80 and 81 list both SMS and MMS addresses for all US carrier (the table below was extracted from version 1.6.1, and could be outdated in the future). The PDF is found at <https://www.dhs.gov/publication/fog-documents>. Be sure to check for updates!
4. Keep in mind that individual entries in your Winlink Whitelist will disappear if they are not used during a rolling 400 day period. Run periodic tests for key recipients.

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Text Messaging Address Table (extracted from the NIFOG, version 1.6.1)

Selected US & Canadian Cellular Text Messaging Carriers (Cellular Provider Domains)	
<i>"number" is the 10-digit mobile telephone number, unless 11-digit-number is specified</i>	
Alltel	SMS: number@sms.alltelwireless.com MMS: number@mms.alltelwireless.com
AT&T	SMS: number@txt.att.net MMS: number@mms.att.net
Bell Canada	SMS & MMS: number@txt.bell.ca
Boost Mobile	SMS: number@sms.myboostmobile.com MMS: number@myboostmobile.com
C Spire Wireless	SMS & MMS: number@cspire.com
Cricket Wireless	SMS: number@sms.mycricket.com MMS: number@mms.mycricket.com
Metro PCS	SMS & MMS: number@mymetropcs.com or number@metropcs.sms.us
Qwest	SMS & MMS: number@qwestmp.com
SouthernLinc Wireless	SMS: number@page.southernlinc.com MMS: number@mms.southernlinc.com
Sprint	SMS & MMS: number@messaging.sprintpcs.com
T-Mobile	SMS & MMS: 10-digit-number@tmomail.net
Telus Communications	SMS & MMS: number@msg.telus.com
TracFone	SMS & MMS: number@mmst5.tracfone.com
U.S. Cellular	SMS: number@email.uscc.net MMS: number@mms.uscc.net
Verizon	SMS: number@vtext.com MMS: number@vzwpx.com
Virgin Mobile	SMS: number@vmobl.com MMS: number@vmpix.com
Alaska	
Alaska Communications	SMS: number@txt.acsalaska.net MMS: 11-digit-number@mms.ak.net
General Communications Inc. (GCI)	SMS: number@mobile.gci.net MMS: number@mms.gci.net
Puerto Rico	
Centennial Wireless	number@cwemail.com
Claro	number@vtexto.com
TracFone	number@mmst5.tracfone.com

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U.S. Virgin Islands	
Centennial Wireless	number@cwemail.com
TracFone	number@mmst5.tracfone.com
Worldwide	
Iridium	SMS: number@msg.iridium.com