

NOKIA 9210 Communicator



SUPPORT GUIDE FOR INTERNET SETTINGS

NOKIA

Contents

1. INTRODUCTION	1
2. CREATING INTERNET CONNECTIONS	2
1.1 CONNECTION DETAILS	2
1.2 ADVANCED SETTINGS	3
1.2.1 SETTING PROXIES	3
1.2.2 MODIFYING DATA CALL SETTINGS	4
1.2.3 TAKING CALLBACK INTO USE	5
1.2.4 OTHER SETTINGS	6
1.2.5 SETTING SCRIPT OPTIONS	7
1.2.6 SETTING SERVER ADDRESS OPTIONS.....	7
1.3 EDITING INTERNET ACCESS.....	8
3. TROUBLESHOOTING INTERNET CONNECTIONS	10

Legal Notice

Copyright © Nokia Mobile Phones 2001. All rights reserved.

Reproduction, transfer, distribution or storage of part or all of the contents in this document in any form without the prior written permission of Nokia is prohibited.

Nokia and Nokia Connecting People are registered trademarks of Nokia Corporation. Other product and company names mentioned herein may be trademarks or tradenames of their respective owners.

Nokia operates a policy of continuous development. Nokia reserves the right to make changes and improvements to any of the products described in this document without prior notice.

Under no circumstances shall Nokia be responsible for any loss of data or income or any special, incidental, consequential or indirect damages howsoever caused.

The contents of this document are provided "as is". Except as required by applicable law, no warranties of any kind, either express or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose, are made in relation to the accuracy, reliability or contents of this document. Nokia reserves the right to revise this document or withdraw it at any time without prior notice. The availability of particular products may vary by region. Please check with the Nokia dealer nearest to you.

1. INTRODUCTION

To access the Internet (in order to use WWW, WAP or mail),

- the cellular network (GSM 900/1800) you use must support data calls,
- the data service (also the High-speed [HSCSD] service if used) must be activated for your SIM card
- you must have obtained an Internet Access Point (IAP) from an Internet service provider, and
- you must have entered the proper Internet settings in your communicator.

This document is a support guide for the configuration of Internet settings in order to be able to access the Internet with the Nokia 9210 Communicator. Information concerning the correct settings must be obtained from your Internet service provider. The service provider may be able to configure the access point for you via a special SMS message, or a WWW page, which sets up all the necessary Internet access settings. Please contact your Internet Service Provider (ISP) for details.



Note: The necessary settings for Internet configuration are provided by your Internet Service Provider. If your Internet settings are incomplete or incorrect, please contact your Service Provider. Depending on your ISP or network operator, you may not need to fill in all of the settings

2. CREATING INTERNET CONNECTIONS

To set up a new Internet Access Point, open Internet startup under the Extras application, and select Internet access (a shortcut to Internet startup can be found in the Desk application)

1. Open Internet startup from Desk or from under Extras.
2. Select Internet access and press **Open**.

If you want to modify an existing Internet Access Point, open Internet access from Control Panel in the Extras application.

1. Open Control Panel from Extras.
2. Select *Internet Access* and press **Open**.
3. To view and edit existing Internet connections, select the IAP you want by pressing **Change**, or to create a new Internet Access Point, press **New**.

1.1 CONNECTION DETAILS



3. Create a *Connection name* that you can recognise easily (e.g. name of the ISP). This can be whatever you want.
4. Type in the *Phone number* of your Internet account. If you intend to use this Internet Access Point when roaming in another country, you can use the + sign in front of the number. (e.g. +358 for Finland). This is the phone number of the dial-in line (also called the modem pool, or PPP servers) of the Internet Service Provider. Your ISP may have several different phone numbers for different modems. If you intend to use High-speed data services, contact your Internet Service Provider to find out which of their dial-in numbers provides the best possible service.
5. Set *Password prompt* to *Yes* if you want to type in your password every time you log in. Select *No* to save your password in your communicator and automate the login procedure. If you are using one-time passwords (such as RSA SecurID or OTP), select *Yes*.

6. Type in the *Username* for your Internet account. This is your username, not your mail address.
7. Type in the *Password* for your Internet account. Then confirm the password by retyping it in the *Confirm password* field. Note that the characters in your password are replaced with symbols so that nobody can see them accidentally. Note that usernames and passwords are usually case-sensitive (capitalisation of letters matters).

The username and password are used for PPP (Point-to-Point protocol) authentication and supplied to you by your Internet Service Provider. Some IAPs do not require the username and password; some IAPs may only require the phone number and the connection name.

1.2 ADVANCED SETTINGS

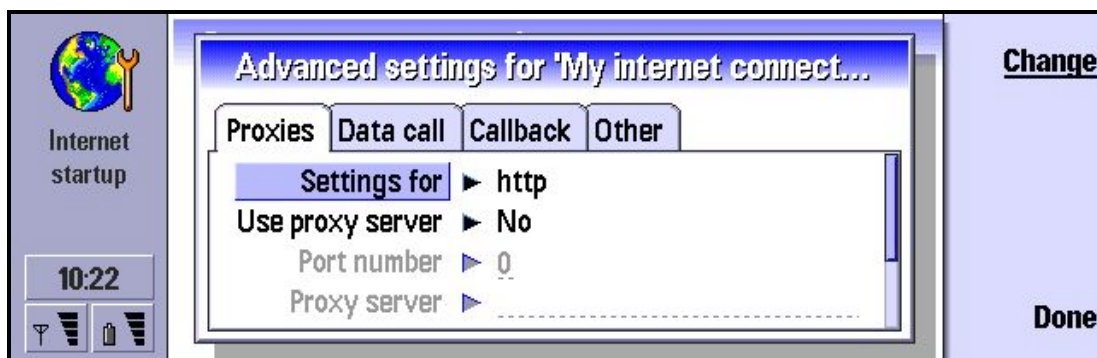
To define the advanced settings of the connection, press **Advanced settings**. A dialog with four pages opens.

1.2.1 Setting proxies

You may wish to use a proxy to speed up access to the Internet. Note also that some ISPs require the use of WWW proxies; contact your ISP to determine the proxy details.

You may also need a proxy server when you have an Internet connection for your company's intranet, and as a result are unable to retrieve Web pages from the WWW. In this situation you may need to set up a proxy server to retrieve Web pages outside your company's intranet.

A proxy is a server at the interface between your communicator and the remote (target) WWW server that offers the Web pages. Proxies usually cache popular documents so that they do not need to be reloaded from the remote server every time they are accessed. After you get the connections working, you may want to test the connection speed with and without proxies to find out whether they offer any increase in speed.



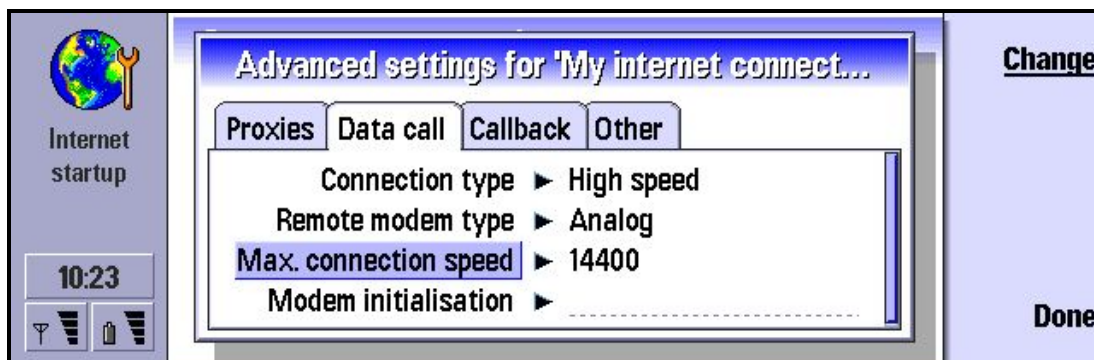
1. Select the *Protocol* for your connection. (HTTP is for normal WWW connections and HTTPS is for SSL-secured WWW connections. Usually, but not always, the proxy information is the same for both protocols.)
2. Set *Use proxy server* to *Yes* or *No* according to your setting requirements.
3. Type in the *Port number*. This is often 8000, 8080 or 80, but can vary by proxy server. Contact your Internet Service Provider for details.
4. Type in the address of the *Proxy server* (either the domain name or the IP address) Contact your Internet Service Provider for details.
5. Type domains that should not be accessed through the proxy server in the *No proxy for* field. Separate each domain with a semicolon (;). For example, if you want to use proxies for all pages other than those that reside in your company's intranet, write your company's domain name (e.g. yourcompany.com) in this field. If your company intranet requires the use of proxy servers, contact your support person for details.



Note: Settings 3, 4 and 5 are available only when proxy servers are used.

1.2.2 Modifying data call settings

1. To activate the *Data call* tab, press the Menu key



2. Select the *Connection type*. The options are *Normal* and *High speed*.



Note: To be able to use *High speed*, the network service provider has to support this feature, and if necessary, to activate it for your SIM card. The term *High speed* refers to HSCSD (High Speed Circuit Switched Data). When using High speed, extra charges may apply, even for received data calls within your home network. Check with your network service provider for details on their pricing.

3. Select the *Remote modem type*. The default is *Analog*, but your service provider may also have ISDN connections available. This setting may depend on both your GSM network operator and ISP, because some GSM networks do not support certain types of ISDN connection. For details, contact your ISP and network provider. ISDN connections are preferable to analog connections because they offer considerably faster data call

establishment (often about twenty seconds faster than with analog connections), and offer higher data transfer speeds as the connection is fully digital from end to end. On the other hand, if you have problems establishing a data call (for example, when roaming outside your home network), using analog connections may help you to establish a connection.

4. Set the *Maximum connection speed*. When your Connection type is *Normal*, only *autobauding*, *9600* and *14400* are available. Different, higher connection speeds are available with different combinations of High speed settings. Higher data rates may cost more, depending on the network service provider. The speed indicated here is the maximum speed that will be used. The true data transfer speed depends on congestion in the Internet, the type of data you are downloading, whether you are running other applications on the communicator, on the congestion of the mobile phone network and on your location in the mobile phone network. In poor reception areas, the network may choose to use a significantly lower transmission speed.
5. Type in the *Modem initialisation* string if needed, to control the communicator using modem AT commands. Enter characters specified by your network service provider or ISP; otherwise, leave this field empty. The modem initialisation string specified here will override all other data call settings. The initialisation string may be required if the normal settings are not sufficient for a particularly complex network/IAP configuration.



Tip: If you are unable to connect to the Internet Access Point when you are roaming in a foreign network, try to select a different operator. If that does not help, try to use the following settings: *Normal*, *Analog* and *Autobauding*. This is the basic (and, unfortunately, also the slowest) combination that is supported by all networks that support GSM data transfers.



Tip: If you want to save money and to only occasionally use high-speed data calls, create several IAPs with different data call settings, and set *Show connection dialog* to *Yes* in the *Internet Access* main view in *Extras*. This way, you can select a suitable data transfer speed for each task you execute.



Tip: Increasing the maximum transfer speed increases the download speed (data transfer from the Internet to your communicator). However, the upload speed (data transfer from the communicator to the Internet) stays the same (9600 or 14400 bits per second) unless you select *28800* as the maximum speed, in which case the both the upload and download speeds will be 28800 bits per second. This is usually only important when you send large files from your communicator (such as mail attachments).

1.2.3 Taking callback into use



Note: Most public ISPs do not support callback. Most common callback users are companies and other private dial-up systems that require increased security.

This option allows a server to call you back once you have made the initial call, which means in most countries that a connection is established without your having to pay for the call. Contact your ISP to find out whether this service is available and to subscribe to this service.

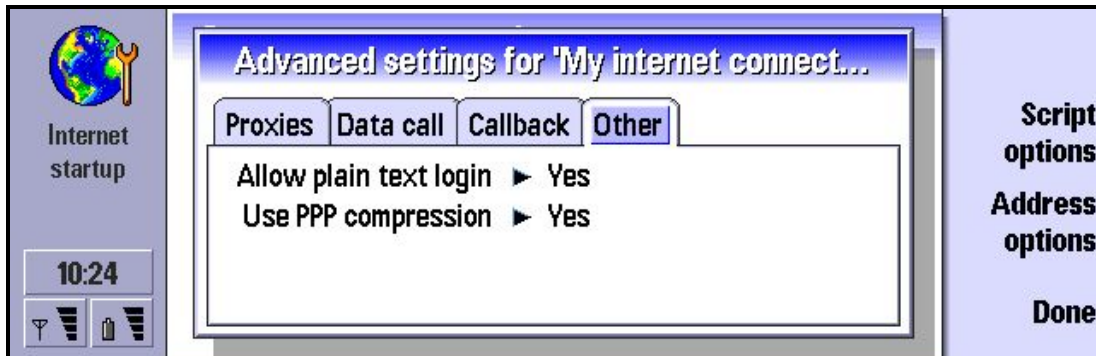
If you are roaming outside your home network or use high-speed data calls, you may still have to pay for part of the call.

1. To activate the *Callback* tab, press the Menu key.
2. Set *Use callback* to *Yes* if you have a service that dials back to your phone when you establish an Internet connection. Callback works as follows: you first dial into the IAP, and request callback. The data call is then closed. Within a minute, the IAP has to call back to your communicator.
3. Select the *Callback type*. You have the option of choosing between IETF PPP callback protocol, which calls back to a number stored on the callback server, and two different modes of Microsoft callback protocol, one of which uses a number stored on the server, and one which uses a client-supplied phone number.
4. If you selected *Use number below*, type in your *Callback number*. This number is usually the data call phone number (not the voice number) of your communicator. This is filled in when using Microsoft callback protocol in a mode where the client specifies the number to call back.

The Callback call from the remote server must use the same data call settings as the callback-requesting call. The network has to support the call type in both directions (to and from the communicator). You may need to ask your ISP to configure the callback server accordingly, and check with your network provider as to whether the GSM network supports this functionality.

1.2.4 Other Settings

1. To activate the *Other* tab, press the Menu key.



2. Set *Allow plain-text login* to *No* if you don't want to send your password as plain text without encryption. Note that this option only affects PPP connections, and some ISPs require that this setting be set to *Yes*. Check with your ISP: if your ISP supports CHAP or MS-CHAP, set this to *No*; if they only support PAP, set this to *Yes*.
3. Set *Use PPP compression* to *Yes* to enable compression. When set to *Yes*, this option speeds up the data transfer (especially when downloading text and other compressible information) if it is supported by the remote PPP server. If you have problems establishing a connection, try setting this to *No*.

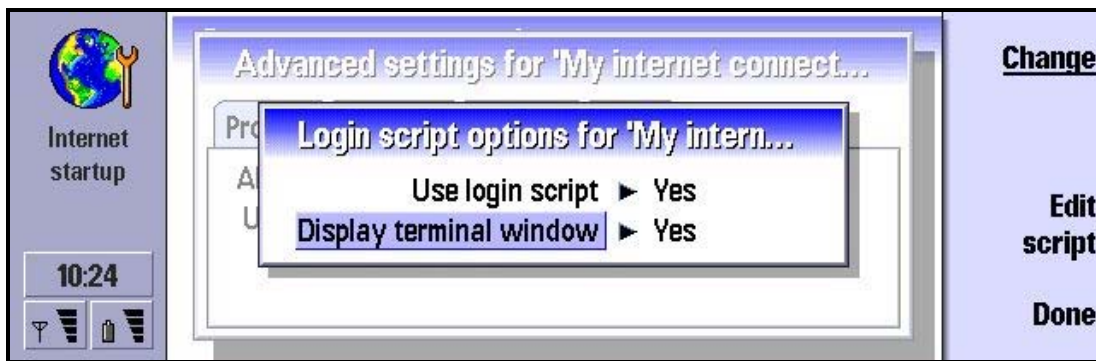
1.2.5 Setting script options

If you need to define script options for your Internet connections, move to the *Other* page of the Advanced settings dialog, then press **Script options**. A script can automate the connection between the communicator and the server.



Note: Scripts are not usually required when you establish a connection. To find out whether you need a script, contact your ISP. Usually a script is required if the login procedures do not use standard PPP authentication systems (PAP, CHAP or MS-CHAP).

1. Press **Script options** to open the Script options dialog.



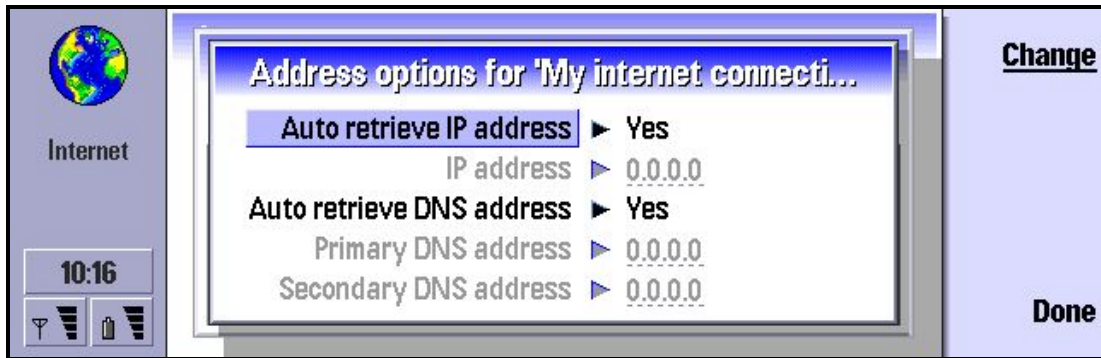
2. Set *Use login script* to *Yes* in case your Internet service provider requires a login script, or if you want to automate your login with a script yourself.
3. Set *Display terminal window* to *Yes* if you want to be able to see the execution of the script or to interact with the terminal server during login. Note that this setting is only available when *Use login script* is set to *Yes*.
4. To view and modify the script, press **Edit script**.
5. Type in the script. This information is provided by your Internet provider. Press **Import script** to import script from a file. The scripting syntax is available from Forum Nokia, and has to be imported in Unicode format. Note that the scripting syntax is not compatible with the Nokia 9110 Communicator.
6. Press **Done** to finish.
7. Press **Done** to close script options.

1.2.6 Setting server address options



Note: Usually you do not have to alter **Address options**. Most ISPs support automatic configuration of IP and DNS addresses.

1. Press **Address options** to open the server address options dialog.



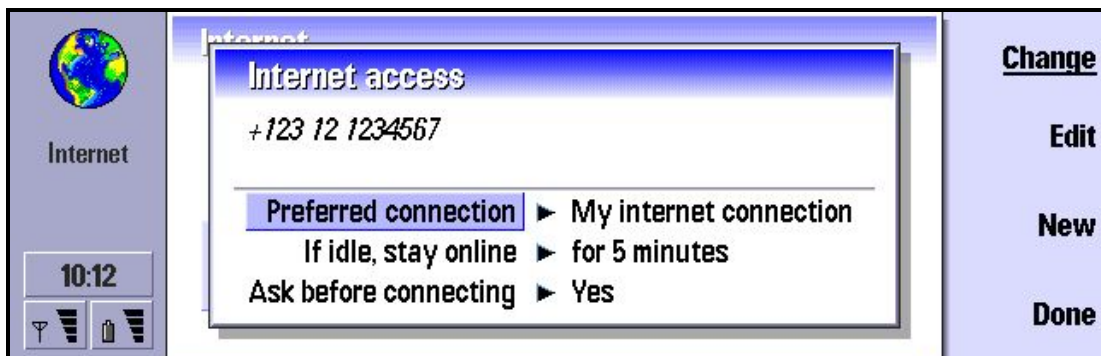
2. In the Address options dialog, you can set the addresses of your Internet services. IP addresses are unique strings of numbers that point to computers on the network. Set *Auto retrieve IP address* to *Yes* if you want to obtain the IP addresses automatically from the server (this is also called the dynamic IP). To type in the IP addresses on the fields below, select *No*. Type in your IP address if *Auto retrieve IP address* is set to *No*. In this case, your ISP will provide you with a fixed IP address.
3. If you cannot auto retrieve DNS addresses automatically, set *Auto retrieve DNS address* to *No*, and type in the *Primary DNS address* and the *Secondary DNS address* if necessary. DNS means 'domain name server,' that is, a server that translates domain names (foo.bar.com) into IP addresses (of the type 000.000.000.000).
4. Press **Done** to close the Address options dialog.
5. Press **Done** to close the Advanced settings dialog.
6. Press **Done** to close the Connection details dialog.




Note: New connections are set as the Preferred connection by default. To select a different Preferred connection, follow the instructions in the next chapter.

1.3 EDITING INTERNET ACCESS

To edit some additional settings of already configured Internet access points, press the Menu key and open the Control panel under *Tools* (or open it from *Extras*). Open Internet access.





In addition to the settings discussed above, you can also edit the following settings:

- *Preferred connection*: If you have configured several Internet access points, select which one is the preferred one when connecting to the Internet.
- *If idle, stay online*: The connection to the Internet will automatically close after the inactivity period defined here. The options are *For 2 minutes / For 5 minutes / For 10 minutes / For 60 minutes*.
- *Ask before connecting*: To monitor the connection process, set this setting to *Yes*. This way you can always see when a connection is established as the connection dialog opens when you use the Web browser. If you are using several different IAPs, for example, one for company intranet and one for public WWW access, or one for normal and one for high-speed data calls, it is recommended to set this to *Yes* so that you can always be sure to which IAP the connection will be made.

Press **Done** to close the Connection details dialog.

You have now set up an Internet connection.

3. TROUBLESHOOTING INTERNET CONNECTIONS

Internet connections, by their nature, are prone to difficulties. There are several players involved: your communicator and its settings; the GSM network service provider(s); the Internet Service Provider and its settings; the server administration, and the connections in the Internet that may travel through several different operators. If Internet connections fail, it will help greatly if you can eliminate some of these factors from the problem. To aid the user, here is a checklist of issues that can be done. Firstly, try to establish a successful data call. Then try to connect to the WWW server of your ISP. Next, try to connect to a remote WWW server or remote mailbox. When you call the customer service of your ISP or network provider, it will help to speed up the process if you have eliminated some of these factors.

1. Is the data call active when you are trying to connect? Look at the data call indicator on the phone side. If the data call is dropped after a few seconds after starting to connect, check for the following:

- Check the phone number in the Internet Access settings. It may be incorrect, or you may be using a national phone number from a foreign network. You can try to call to that number by dialling a normal voice call to check whether a modem answers.
- If the phone number is correct, the reason may be poor network conditions or a congested GSM network. Verify that you are in an area of good coverage. If you are roaming outside your home network, try to select another GSM network. Also check the Data call settings in the Internet Access settings (connection type, data call type and maximum connection speed). You can try connecting using the settings *Normal*, *Analog* and *Autobauding*.
- Contact your network service provider if you have problems with data call establishment, and your Internet Service Provider to find out the correct remote modem type (analog or ISDN, and the type of ISDN supported by the ISP's equipment). Also verify that the data service is activated on your SIM card. High-speed data services may require a separate subscription.

2. If the data call is active but you cannot receive or send mail, try to use the WWW browser to connect to your Internet Service Provider's WWW pages. If that works, the problem is most likely with the mail settings or the remote mailbox service. For more information, see the support guide for mail settings. Check the following in particular:

- Mail server addresses, username and password. Check with your ISP to find out your current password.
- Whether you are using the correct Internet Access Point (a company intranet access point needs to be used for intranet mail).
- Check that you have selected the correct remote mailbox protocol (POP or IMAP).
- APOP and secure connection settings: does your mail service provider support these features?

3. If the data call is active but you cannot download WWW pages with the WWW browser, make note of the most recent status indication displayed to you in the title bar of the WWW browser.

- If the status indication reads "Waiting for reply from host" or "Looking up host name," it is likely that the WWW address (URL) has been mistyped, or that there is a problem with proxy server settings in the Internet Access Point or the proxy server itself, or else that there is a transient problem with the WWW server or Internet connections between the WWW server and your Internet Service Provider. Firstly, try to reload the page (press menu and select **View | Reload**). If that does not help, disconnect the call (close the WWW application and press **Disconnect**), wait for a couple of minutes and retry the connection. If the connection still does not succeed, contact your Internet Service Provider. It will be helpful to them if you have your settings close at hand and have made a note of the status indications you have seen in the WWW browser and whether you are able to retrieve any other WWW pages.
 - If the status indication reads "Logging into network" or "Connected," the problem is most likely in your Internet Access Point settings, or your Internet Service Provider's dial-up system, or you might need a script in order to connect to your Internet Service Provider. Disconnect the data call (close the WWW application and press **Disconnect**), wait for a couple of minutes and retry the connection. If the connection still does not succeed, contact your Internet Service Provider. It will be helpful to them if you have your settings close at hand and have made a note of the status indications you have seen in the WWW browser.
 - If the status indication reads "Initialising" for a prolonged time, close the Web browser and reopen it.
4. If your data call is unexpectedly dropped, this may be due to poor network conditions, congestion in the phone network, or a too low inactivity period setting. Unexpected data call failures are sometimes observed in moving vehicles. If the data transfer speed is slowed down, this may be due to a congested phone network or to congestion in the Internet.