



WORLD DATA SERVICES

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1 Introduction to Iridium World Data Services

The Iridium Satellite system provides a range of flexible and reliable data services. Using your computer and an Iridium satellite phone, you can connect to the Internet or a corporate network from virtually anywhere in the world, allowing you to:

- Browse the web
- Send and receive email
- Transfer files

With Iridium World Data Services, you can configure your computer for two different types of data calls, depending on your needs: **Dial-Up Data** and **Direct Internet Data**.

Using...	You can connect to...	At a typical speed of...
Dial-Up Data	Another computer, your corporate network or your personal Internet Service Provider, via a landline phone number you provide	2.4 Kbps
Direct Internet Data	The Internet, directly through the Iridium Gateway	Up to 10 Kbps*

* Depending on content. Graphics and images will result in lower effective throughput.

1.1 Which type of data service is right for you?

If you need to connect only to the Internet, and you do not require the services of your personal Internet Service Provider, then we recommend that you use *Direct Internet Data* to take advantage of the higher connection speed and airtime management features. If you need to connect to another computer, a corporate network or to your own personal Internet Service Provider, then you will need to use *Dial-Up Data*.

To use either type of Iridium World Data Services, you must connect a computer to a data-capable Iridium phone, use a SIM card that is provisioned for data, and install the appropriate software on your computer.

2 Dial-Up Data Overview

Dial-Up Data Service provides dial-up connectivity through your Iridium phone to another computer, a remote LAN (e.g., a corporate network), or an Internet Service Provider (ISP). This service offers a typical data rate of 2.4 Kbps.

You will be able to use Dial-Up Data service just as you would use the modem on your computer to dial a call through the public switched telephone network (PSTN). The only differences are that the dialed telephone number must conform to the international dialing pattern used by Iridium, and that you will use your Iridium phone as the data modem. In essence, your Iridium phone appears as an external modem to your computer. Before using Dial-Up Data, you will need to install the Motorola Satellite Series Data Modem driver (provided on the Iridium World Data Services CD) on your computer. You will then be able to use standard software applications (e.g., Microsoft Dial-Up Networking) to initiate data calls with Dial-Up Data Service.

How it works

You are probably familiar with using your computer and its modem to perform dial-up data applications across the PSTN. Most computers have an internal modem, to which you connect your telephone line. Figure 1 illustrates how you dial your ISP to access the Internet. (The modem is shown external to the computer for illustration purposes.) On your computer, you configure a dial-up networking connection. As part of that connection, you identify which modem to use and the phone number to dial. Then, in dial-up networking you enter your user name and

password to access your ISP, and you initiate the connection. Your modem dials into and connects to another modem at your ISP. Once connected and a session has been established, you can check your email and browse the Internet.

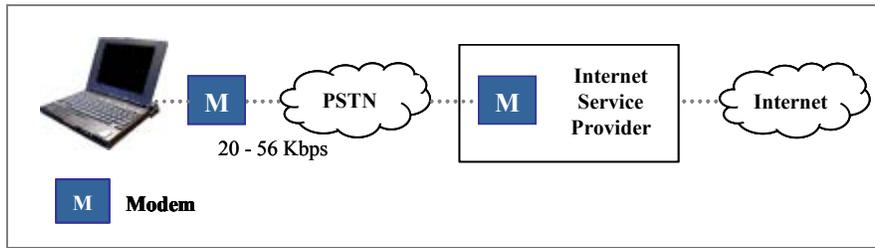


Figure 1. PSTN Dial-Up Connectivity

Dial-Up Data Service functions in much the same way. From the perspective of your computer, the Iridium handset is an external modem. On your computer, you will configure a dial-up networking connection. As part of that connection, you will identify the modem associated with the Iridium handset and the phone number to dial. Then, in dial-up networking you will enter your user name and password to access your ISP, and you will initiate the connection. Your handset will actually dial and initiate a connection with the Iridium gateway through the Iridium satellite constellation. This connection setup is similar to how a voice call is established, except a data connection is requested. Since your Iridium handset is requesting to establish a data connection, the switch at the gateway will route the call through a modem. The modem at the Iridium gateway will then dial into and connect to another modem at your ISP. Once connected and a session has been established, you can check your email and browse the Internet just like you would across the PSTN. Figure 2 illustrates how a Dial-Up data call is routed.

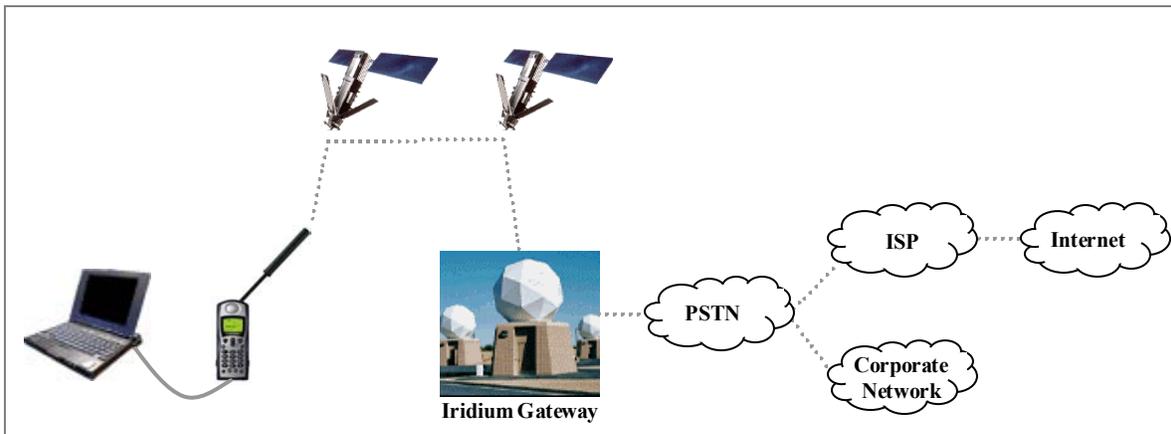


Figure 2. Iridium Dial-Up Data Connectivity

3 Direct Internet Data Overview

Direct Internet Data Service provides enhanced Internet connectivity through dedicated servers at the Iridium gateway, allowing you to execute accelerated file transfers and to more efficiently browse the Internet and exchange email. Using this service, you connect directly to the Internet, using your Iridium phone as a data modem. In essence, your Iridium phone appears as an external modem to your computer.

Direct Internet Data Service offers faster connection times, improved throughput, and Smart Connect™ features. Smart Connect™ assists you in managing your airtime by seamlessly connecting and disconnecting you through the Iridium system when no data is being transferred. This feature, called “spoofing”, will reduce airtime charges, improve the phone’s battery life, and allow you to seamlessly reconnect to the Iridium system if your connection is dropped. Airtime charges accumulate only while the call is connected.

Improved effective data throughput is achieved through the use of user-transparent data compression. The channel rate is still 2.4 Kbps. However, 10 Kbps effective throughput can be achieved depending on content (graphics and images will result in lower effective throughput).

Before using Direct Internet Data, you will need to install the client software (provided on the Iridium World Data Services CD) on your computer.

How it Works

To access Direct Internet Services, you will need a computer and data capable Iridium phone. You will connect the computer to the handset via a serial cable and data connector. (If you are using a 9570 Portable Dock, you will only require the serial cable. If you are using a 9520 Mobile Phone, you will not require any additional hardware). This service utilizes dedicated servers at the Iridium gateways, which provide high-speed connectivity to the Internet and optimized server-to-handset communications.

By initiating a connection through the client software, your handset will dial and initiate a connection with the Iridium gateway through the Iridium satellite constellation. This connection setup is similar to how a voice call is established, except a data connection is requested and the switch will route the call to the Direct Internet server. Once connected to the Direct Internet server and a session has been established, you will be seamlessly connected to the Internet, as if you were on a LAN. You can then check your email and browse the Internet just like you would via Dial-up Data Service, except that now you have the advantages offered by the Direct Internet Data Service. Figure 3 illustrates how a Direct Internet Data call is routed.

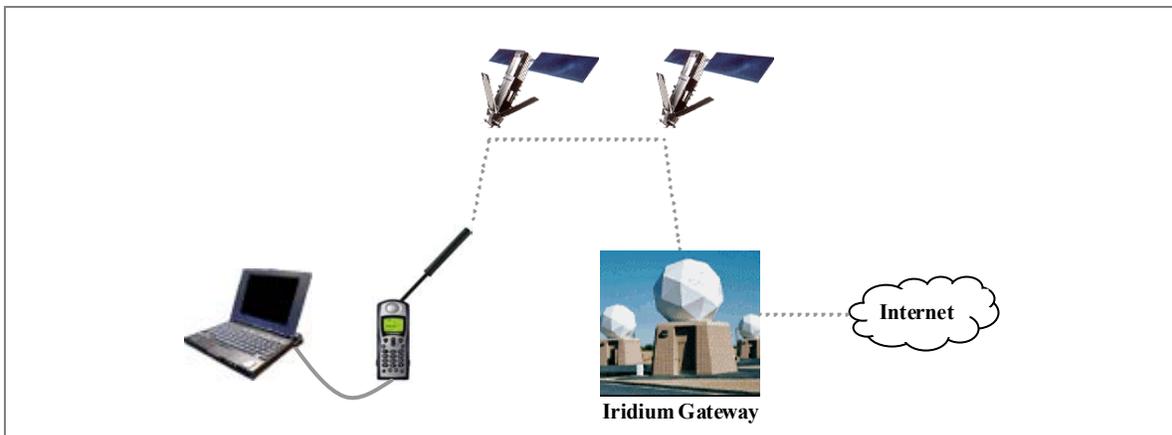


Figure 3. Iridium Direct Internet Data Connectivity

4 Hardware/Software Requirements

To use Iridium World Data Services, you will need the following:

- ✓ **A Windows®-based PC**, with:
 - Windows® 95, 98, Me, NT4.0 (Service Pack 4 or later), 2000 or XP
 - CD-ROM drive
 - Serial port

- ✓ **A SIM Card** that is provisioned for data (note that this SIM can also be used for voice calls).

- ✓ **An Iridium Phone** with a data-capable internal software version and additional hardware/software:

Iridium Phone Type	Software Version Required	Hardware/Software Required
Motorola 9500 Portable Phone	INC0620 or later ¹	Data Kit
Motorola 9505 Portable Phone	LAC109G or later ¹	Data Kit
Motorola 9520 Mobile Phone	RAC0620 or later ¹	Data CD
Motorola 9521 LBT-based products (e.g. the Iridium 9500 Data Module)	RAC0620 or later	Custom Cable, Power Supply ² and Data CD
Motorola 9522 LBT-based products	All software versions for the 9522 are data capable	Custom Cable, Power supply ² and Data CD
EuroCom Fixed Mount Unit	Transceiver software version 3.xx.xx or later ³	Serial Cable ⁴ and Data CD

¹ To check the software version: Turn the phone on and press *#91#.

² Consult product documentation for details.

³ Consult the user's guide that came with the phone for instructions on how to check the transceiver software version.

⁴ Included with the phone. Note that this is a "straight through" and **not** a null modem cable.

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