Bluetooth®

Model No.: BDG-00A1
Description: Bluetooth USB Dongle

User Guide

IVT BlueSoleil™
Version: 1.4.7

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1 Introduction to BlueSoleil™

BlueSoleil is a Windows-based software from IVT that allows your *Bluetooth*® enabled desktop or notebook computer to wirelessly connect to other *Bluetooth* enabled devices. BlueSoleil allows MS Windows users to wirelessly access a wide variety of *Bluetooth* enabled digital devices, such as cameras, mobile phones, headsets, printers, and GPS receivers. You can also form networks and exchange data with other *Bluetooth* enabled computers or PDAs.

1.1 Platforms supported by BlueSoleil include:
Windows 98SE, ME, 2000, and XP *Bluetooth*
Functions
In order to connect and share services via *Bluetooth* wireless technology, two devices must support the same *Bluetooth* Profile(s) as well as opposite device roles (i.e., one must be the server, and the other must be the client). *Bluetooth* enabled devices often support multiple profiles, and if involved in multiple connections, can perform different device roles simultaneously. BlueSoleil supports the following *Bluetooth* functions (Profiles) in the following device roles:

Bluetooth Functions(Profiles)	Client	Server
AV Headphone	v	v
Basic Image Profile	v	v
Dial-Up Networking	v	
Fax v	v	
File Transfer	v	v
Headset	v	v
Human Interface Device	v	
LAN Access	v	v
Object Push	v	v
Personal Area Networking	v	v
Printer	v	
Serial Port	v	v
Synchronization	v	v

Notes:
  . *Only one Headset or AV Headphone connection can exist at a time, since since there is only one virtual Bluetooth audio device.*
  . *The Headset and AV Headphone Profiles do not work on Windows 98SE or Windows Me.*

1.1   Main Window

Note: For more complete information about the Main Window (including the icon meanings) as well as information about the Service Window and BlueSoleil menus, please refer to Chapter 4.

By default, BlueSoleil starts with the Main Window open. Use the Main Window to perform your primary connection operations. The Main Window displays the local device (red ball) as well as the remote devices detected in range. Different icons distinguish different types of remote devices.

At the top of the Main Window are Service Buttons. After you search for the services supported by a remote device, the supported services of the selected device will be highlighted.

Local Device — Basic Operations:
  Hover your mouse over the red ball to display the local device's Bluetooth name and address.
  Click on the red ball to start or stop searching for Bluetooth devices in range.
  Right-click on the red ball to display a pop-up menu of related operations (e.g.,General Inquiry, My Services, Security, etc.).

Remote Devices — Icon Meanings
  White —Idle. The normal state of the device.
  Yellow—Selected. You have selected the device.
  Green— Connected. The device is connected to your local device.

Remote Devices — Operations
  Single-click to select.
  Double-click to search for the services supported by the device.
  Right-click to display a pop-up menu of related operations (e.g., Refresh Devices, Pair Devices, Connect, etc.).

Services — Icon Meanings
  White — Idle. The normal state.
  Yellow — Available. The service is available on the selected device.
  Green — Connected. The service is active in a connection with the remote device.

Services — Operations
  Hover your mouse over the service icon to display the name of the service.
  Single-click on the service icon to connect.
  Right-click on the service icon to display a pop-up menu of related operations.

2 Basic Operations

2.1 Insert Adapter

BlueSoleil supports Windows systems enabled with *Bluetooth* wireless technology via either a USB adapter or a CompactFlash (CF) card.

IMPORTANT! Be sure to insert the Bluetooth adapter BEFORE you install the software!

USB Adapter:
1. Insert the USB adapter into the USB port of your computer.

CompactFlash Card:
1. Insert the CompactFlash card into your computer. To use a CF card in a PC Card (PCMCIA) slot, first plug the card into a CF-to-PC Card adapter.
2. The Found New Hardware Wizard will automatically start. Make sure the installation CD is still in your computer. Follow the wizard to install the card drivers.

2.2 Install the Software

IMPORTANT! If you have any Bluetooth software previously installed on your computer, you must completely remove it first!

1. Insert the BlueSoleil software installation CD into the CD drive of your computer.
2. Use My Computer or Windows Explorer to access your CD drive. In the CD, click on SETUP.EXE.
3. Follow the directions on your screen to install the software.
4. As prompted, when software installation is complete, restart your computer.

2.3 Start BlueSoleil

1. Start BlueSoleil. Click on the BlueSoleil icon on your desktop, or go to Start | Programs | IVT BlueSoleil | BlueSoleil.
Note: BlueSoleil will detect each insertion or removal of the USB adapter. Alternatively, you can start BlueSoleil before plugging in the USB adapter.
2. The very first time you use BlueSoleil, the Welcome to *Bluetooth* screen will appear. Assign your Windows system a name and device type, to be shown to other *Bluetooth* enabled devices. In most cases, you should leave the security setting checked. Click OK.

2.4 Search for Other *Bluetooth* Enabled Devices

Before it can connect, your computer must first detect other *Bluetooth* enabled devices in range.

Initiate a Device Search

1. Make sure that the *Bluetooth* enabled device you wish to connect to is turned on, with sufficient battery power, and set in discoverable mode. Have any necessary passkeys ready. If necessary, you may also need to enable the service you want to use on the remote device. Refer to the remote device's user documentation for instructions. If you haven't done so already, you may also want to assign the device a *Bluetooth* name. Refer to the device's user documentation for instructions.

2. In the Main Window, click on the red ball to start the device search. Alternatively, you can click My *Bluetooth* | My Device Inquiry or View | Refresh Devices or press F5.

3. After a few seconds, an icon will appear around the center ball for each *Bluetooth* enabled device detected within the radio range .

Note:
 . *The Main Window can display only eight discovered devices at a time. If BlueSoleil discovered more than eight devices, use the scroll bar to view the remaining devices discovered by BlueSoleil.*
 . *To sort the devices by device name, device address, or device type, click View | Arrange Devices.*

4. Wait several seconds until BlueSoleil reports the name of each device.

5. If the device you want is not listed, make sure that the device is turned on and discoverable and try searching again. You have multiple options for starting another search:
 . *If you start another search by double-clicking on the red ball or clicking My Bluetooth | My Device Inquiry or View | Refresh Devices, then the list of previously detected   devices will not be cleared.*
 . *If you start another search by pressing F5, then the list of previously mndetected devices will be cleared.*

2.5 Establish Connection

Note: These are generic instructions for any type of Bluetooth enabled device. Refer to the instructions in Chapter 3 for specific details for the type of service you plan to use. Normally, a connection is initiated from the client. Check the chart in Chapter 1 to verify which device role BlueSoleil supports for the service you wish to use.
  . *On the server side, start the service*
  . *On the client side, initiate the connection*

Start the Service
If you would like to use your computer as a server in a *Bluetooth* connection, you must first start (enable) the appropriate service(s) on your system.

1. Access the Service Window. Click View | Service Window.

2. If the icon for a service is highlighted (yellow), then the service has already been started. If the icon is white, then you need to start the service in order to use it. Right-click the icon. In the pop-up menu, select Start Service. The icon should now be highlighted (yellow). Serial Port icons will also report which COM port is assigned to them.

Note:
  . *Icons will appear only for Bluetooth functions (Profiles) which BlueSoleil supports in the Server device role. See chart in the 1.1 Bluetooth Functions.Depending on your system, multiple icons for Serial COM ports may appear.*

3.After you have started the service in BlueSoleil, now you are ready to initiate the connection from the remote device. For instructions, refer to the user documentation for the remote device.

Initiate the Connection
If you would like to use your computer as a client in a *Bluetooth* connection make sure that you have started (enabled) the service on the remote device. Otherwise, BlueSoleil will not be able to discover the service and connect to it. For instructions, refer to the device's user documentation.
1. Return to the Main Window. Click View | Main Window.

2. Double-click on the icon for the device you wish to connect to. BlueSoleil will begin to search for information about which services the device supports.

3. After the search, icons will be highlighted (yellow) at the top of the BlueSoleil Main Window for services that are supported by the device. Verify that the service you want to use is supported.

4. Right-click on the device icon. In the pop-up menu, click Connect, then select the service. BlueSoleil will start the connection. Depending on the security settings of each device, you may need to enter the same passkey on each device in order to bond the two devices.

5. A screen may appear asking if you want to set up automatic connections. Click Yes or No.

6. If you are connecting to a phone, your phone may ask if you want to ask the BlueSoleil computer to your device list. Enter Yes and enter a passkey.

7. When the devices have successfully connected, the device icon in the Main Window will turn green, and a green line will appear between the red ball and the device icon. A red dot will travel along the green line from the client to the server. A signal strength icon will also appear next to the device icon. The BlueSoleil icon in the task tray will also turn green to indicate an active connection.

Note:
A red check mark will appear next to the name of any device that you have previously paired with your computer.

8. Depending on which services you are using, additional screens may appear, and/or you may need to configure additional connection settings (e.g., user name, password, COM port number, etc.). Refer to the instructions in Chapter 3 for your specific service. After configuring the appropriate connection settings, you should be ready to use your application.

9. To end a connection, in the Main Window, right-click on the icon for a connected device. In the pop-up menu, click Disconnect.

Note: You can only disconnect this way if your computer is acting as a client device. If your computer is acting as a server device, then you can disconnect in BlueSoleil by clicking View | Service Window, then right-clicking on the service icon. In the pop-up menu, click Stop Service. Alternatively, you can disconnect from the remote device.

2.6 *Bluetooth* Security

To modify your connection's security settings, click My *Bluetooth* | Security.
BlueSoleil offers three security levels:

. **Low** (Security Mode 1, Non-secure)
No security procedure is needed for connections.
. **Medium** (Security Mode 2, Service level enforced security)

Authentication or Authorization is requested when a specific service is accessed
by other Bluetooth enabled devices. If two devices are connecting for the first time,
or if two devic es do not have a trusted relationship, then the same passkey must
be provided on both sides to complete the Authentication. This mode allows you
to assign different access rights for each service supported by the server device.

. **High** (Security Mode 3, Link level enforced security)
If either of two devices is in Mode 3, Authentication is requested whenever a link
connection is initiated between two Bluetooth enabled devices. The passkey must
be provided on both sides to complete Authentication.
*Note: In Security Mode 2, the user can add each authenticated device into a
trusted device list to expedite future connections.*

3 Getting Started

3.1 AV Headphone
The AV Headphone Profile enables use of a *Bluetooth* enabled headphone to listen to high-quality stereo music played on a computer.

Typical Usage
. *Listen to music using a Bluetooth enabled AV headphone.*
Step 1: Connect to the AV headphone, following the instructions in Chapter 2.
Step 2: Play music using media player software on your computer. Music will transmit wirelessly to the headphone.

3.2 Basic Imaging
The Basic Imaging Profile (BIP) enables users to receive pictures from a *Bluetooth* enabled digital camera, mobile phone, or other compatible device. It also enables remote control of shooting, display, and other imaging functions.

Typical Usage
. *Control camera to take pictures*
. *Receive pictures sent from BIP-enabled digital devices*
Control Camera to Take Pictures
Step 1: Connect to the camera, following the directions in Chapter 2.
A *Bluetooth* Camera Controller will appear,
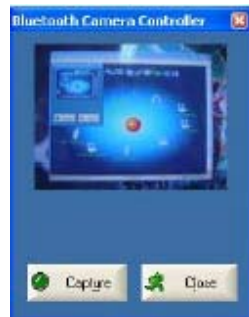
Figure 1.

Step 2: Click the button to capture the image. The captured image will be transmitted to your computer and displayed.

Receive Pictures
Step 1: Assign the directory where you would like to save image files pushed from the
client device. Click My Services | Properties. Click on the Basic Image Push tab. In the
Set the image directory field, browse to select the file location. Click OK.
Step 2: Start the BIP service, following the directions in Chapter 2.

Step 3: Send pictures from the remote device. For instructions, refer to the user documentation for the remote device.

3.3 Dial-up Networking

The *Bluetooth* Dial-up Networking (DUN) Profile enables users to wirelessly dial-up to the Internet through a *Bluetooth* enabled modem or mobile phone that supports the DUN Profile.

Typical Usage
- *Dial-up to the Internet via a Bluetooth enabled mobile phone.*
- *Dial-up to the Internet via a Bluetooth enabled modem.*

Dial-up to the Internet via a Bluetooth enabled mobile phone.

Step 1: Connect to the phone's Dial-Up Networking Service, following the instructions in Chapter 2.

Step 2: The Dial-Up Dialog will appear. Enter the dial-up number, User name, and Password. Make sure the correct dial-up number is entered, then click on the Dial button.

Note: The default dial-up number *99***1# only works with certain GPRS phones and service providers in the United States. If necessary, enter the correct dial-up number for your InternetService Provider (ISP).

Note: After you successfully connect, a screen will ask if you would like to create a dial-up shortcut on your desktop. This would allow you to conveniently dial up and connect by simply clicking on the shortcut, without having to manually start BlueSoleil. Alternatively, after starting BlueSoleil, you can start the shortcut by clicking Tools | My Shortcuts.

Figure 1 Dial-Up Dialog

Dial-up to the Internet via a Bluetooth enabled modem.

Step 1: Connect to the modem's Dial-Up Networking Service, following the instructions in Chapter 2.

Step 2: The Dial-Up Dialog will appear. Enter the dial-up number, User name, and Password. Enter the correct dial-up number, then click on the Dial button.

Note: The default dial-up number *99***1# does NOT work with modems. You need to enter the correct dial-up number for your Internet Service Provider (ISP).

Step 3: Use your email, Internet browsing or other application that utilizes a dial-up connection.

Note: After you successfully connect, a screen will ask if you would like to create a dial-up shortcut on your desktop. This would allow you to conveniently dial up and connect by simply clicking on the shortcut, without having to manually start BlueSoleil.

3.4 FAX

The *Bluetooth* Fax Profile enables users to send faxes from a computer via a *Bluetooth* enabled mobile phone or modem. Typical Usage

. *Send fax via a Bluetooth enabled mobile phone.*
. *Send Fax via a Bluetooth enabled modem.*

Send fax via a Bluetooth enabled mobile phone

Step 1: Connect to the mobile phone's fax service, following the directions in Chapter 2.

Step 2: Use your fax software to send the message.

Send fax via a Bluetooth enabled modem

Step 1: Connect to the modem's fax service, as described in Chapter 2.

Step 2: Start your fax software. Configure your fax software for the Bluelet **Fax** Modem (NOT the Bluelet Modem). Refer to your fax software's user documentation for instructions.

Step 3: Use your fax software to send the message.

3.5 File Transfer

The File Transfer Profile (FTP) enables users to transfer files and/or folders between *Bluetooth* enabled laptops, desktops, PDAs, mobile phones, etc. Typical Usage

 . *Connect to a Bluetooth enabled mobile phone and transfer files or folders to/from the phone.*
 . *Share a folder on your computer with other Bluetooth enabled devices.*
 . *Access a shared folder on another Bluetooth enabled device.* Connect to a Mobile Phone

Step 1: Connect to the mobile phone's FTP service, following the instructions in Chapter 2.

Step 2: The phone's folders are shown in a window. Users can copy/paste/delete files or folders.

Share a Folder on Your Computer with other Bluetooth Enabled Devices

Step 1: Select the folder you would like to use for file sharing and define the remote user privileges. Click My Services | Properties. Click on the File Transfer tab.

Share this folder: Browse to select the folder you would like to share.
Share Permissions: Select Read and Write to allow others to copy, paste or delete files/folders in this folder. Select Read Only to allow others to only browse and copy files/folders from this folder.

Step 2: Start the FTP service in BlueSoleil, following the instructions in Chapter 2. Do not initiate the connection in BlueSoleil.

Step 3: Browse your computer from the remote device. For instructions, refer to the user documentation for the remote device. When the remote device attempts to connect to your computer, the *Bluetooth* Service Authorization screen may appear. Click Yes.

Step 4: After successfully connecting, the remote device can browse, copy, paste, and/or delete files on your computer, depending on the remote folder privileges you allowed. For instructions, refer to the user documentation for the remote device.

Access a Shared Folder on Another Bluetooth Enabled Device

Step 1: On the remote device, designate the folder/files to share. Enable file sharing on the remote device. For instructions, refer to the user documentation for the remote device.

Note: If you do not enable file sharing on the remote device, BlueSoleil will not be able to discover the device's file sharing service.

Step 2: Start the FTP service and initiate the connection in BlueSoleil, following the instructions in Chapter 2.

Step 3: A Remote Shared Folder screen will appear, displaying shared files/folders on the remote device, Use the screen to browse, copy, paste, and/or delete files, depending on your folder privileges.

3.6 Headset

The Headset Profile enables users to use a *Bluetooth* enabled headset as wireless earplug or microphone.

Typical Usage
 . *Use Headset as a device for audio input/output.*

Step 1: Connect to the *Bluetooth* enabled headset, following the directions in Chapter 2.

Step 2: Play music on your computer, or chat using network meeting tools. You may need to press a multifunction button on your headset to transmit audio between the computer and theheadset.

Note: For most Bluetooth enabled headsets, after you have successfully connected for the first time, you can quickly reconnect to BlueSoleil by simply pressing a multifunction button on the headset.

3.7 Human Interface Device

The *Bluetooth* Human Interface Device (HID) Profile enables users to use *Bluetooth* enabled HID Devices such as keyboards, mice or joysticks to control your computer.

Typical Usage
 . *Connect a Bluetooth enabled Mouse and a Keyboard to Your Computer*

Step 1: Connect the *Bluetooth* enabled mouse to your computer, following the instructions in Chapter 2.

Step 2: Connect the *Bluetooth* enabled keyboard to your computer,following the instructions in Chapter 2. Before you can use BlueSoleil to connect, you may need to press a button on the keyboard to make it discoverable.

Note:
 . *The first time you connect the mouse or keyboard to your computer, the Found New Hardware Wizard will automatically launch. In the first screen of the wizard, DO NOT INSERT ANY CD and click Next. Follow the next screens until you complete the wizard. If the wizard reappears, cancel the wizard. You should be able to use the mouse or keyboard with your computer.*

 . *The Bluetooth enabled mouse/keyboard can automatically re-connect to your computer after you successfully establish the initial connection.*

3.8 LAN Access

The *Bluetooth* LAN Access Profile (LAP) allows users to access a Local Area Network (LAN) via a *Bluetooth* enabled LAN access point.

Typical Usage
 . *Access a Local Area Network via a Bluetooth enabled LAN access point*
 . *Use your computer as a LAN Access Point*

Access a LAN via a Bluetooth enabled Access Point (AP)

Step 1: Connect to the LAN AP's LAP service, following the instructions in Chapter 2.

Step 2: In the Connect *Bluetooth* LAP Connection dialog, enter the user name and password if necessary. Click Connect.

Figure 1 Connect Bluetooth LAP Connection

Use your computer as a LAN Access Point (ADVANCED USERS ONLY)

Step 1: Start the *Bluetooth* LAN Access service on BlueSoleil, following the instructions in Chapter 2.

Step 2: Specify any static IP addresses necessary for LAP clients. (Alternatively, you can use DHCP to have the system dynamically assign IP addresses).

(1) In the Network Connections window, right-click Incoming Connection, then select Properties (Figure 2).

Figure 2: Select Properties in the Pop-up Menu

(2)Select Incoming Connections Properties | Networking ->
Internet Protocol (TCP/IP), and click on the Properties button.(Figure 3)
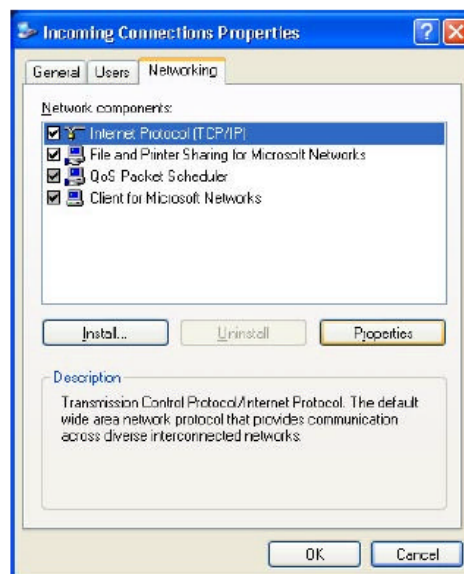
Figure 3: Internet Protocol (TCP/IP) Network Component

(3)Select Specify TCP/IP addresses and enter the range of IP addresses assigned to LAP clients (Figure 4).
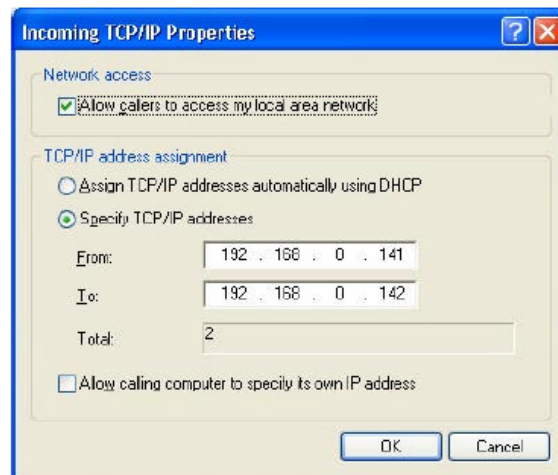
Figure 4. Enter the IP addresses

Note:
 In order to use a Windows 98SE/Me system as an access point, you must have already installed a Dial-up Adapter and the Windows Direct Cable Connection component on the system.

3.9 Object Push

The *Bluetooth* Object Push Profile (OPP) enables users to send and receive Personal Information Management (PIM) data objects (including messages, notes, calendar items, and business cards) to and from a *Bluetooth* enabled PDA or mobile phone.

The objects supported include:
 Contacts (.vcf)*
 Calendar items (.vcs)*
 Notes (.vnt)*
 Messages (.vmg)*

Typical Usage
 Push objects to a Bluetooth enabled mobile phone or PDA
 Receive objects from a Bluetooth enabled mobile phone or PDA

Note: If you would like to push PIM objects to a PDA, make sure that the PDA is ready to receive a PIM object before you start. If necessary, enable Object Push on the PDA. For instructions, refer the PDA's user documentation.

Bluetooth

Push Objects to a Bluetooth Enabled Mobile Phone

There are two methods to push objects:

Method1:From BlueSoleil Main Window:

Double-click on the mobile phone or PDA icon to browse for service information. The Object Push Service icon should be highlighted at the top of the screen. Right click the Object Push Service icon, and in the pop-up menu click Send My Card. (Figure 1)
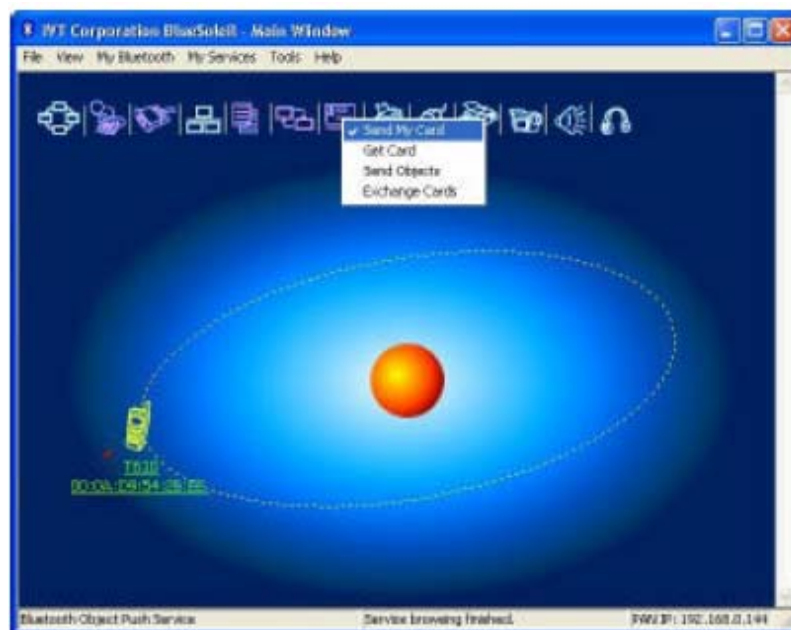
Figure 1: Send Object

Send My Card:
Send your default business card.
Get Card:
Get the phone's default business card.
Send Objects:
Select objects (PIM files ending in .vcf, .vcs, .vnt, or .vmg) and
send them to the phone.
Exchange cards:
Have your computer and the phone to exchange their default business cards.

Method 2: From MS Outlook:
(1) Select the contact that you would like to send.
(2) In Outlook, click on the Push button on the toolbar, or click
File | Push.
(3) The *Bluetooth* Neighbors screen will appear. In the device list, select the phone or PDA that you wish to push the contact to. Click on the Push button.

Receive Objects from a *Bluetooth* Enabled Mobile Phone

Step 1: Configure the parameters for the object push. From the Main Window, click My Services | Properties. Click on the Object Push tab.

Step 2: Start the Object Push service, following the instructions in Chapter 2. Do not initiate a connection, only start the service so that your computer will be ready to receive objects.

Step 3: Send objects from the phone. For instructions, refer to your phone's user documentation.

Notes:
  · *BlueSoleil creates a Bluetooth folder (with Inbox and Outbox subfolders) in your My Documents folder for use with Object Push. The Inbox is used to save objects received from other devices. The Outbox is used to save objects sent out from your computer.*

  · *Your can set your default business card by clicking My Services | Object Push. In the Send My Business Card field, browse to select a contact as your default business card.*

3.10 Personal Area Networking

The *Bluetooth* Personal Area Networking (PAN) Profile enables PCs, laptops, PDAs, and other *Bluetooth* enabled devices to form either of two kinds of PAN networks. In a Group ad-hoc Network (GN), which functions as an isolated network, multiple PAN Users (PANUs) are linked together via a GN controller. Alternatively, a PAN can consist of multiple PANUs linked to a Network Access Point (NAP), which provides access to external Local Area Network (LAN) infrastructure. BlueSoleil supports all three of these device roles — GN (controller), PANU, and NAP.

Typical Usage

. *Group Ad-hoc Network (Peer-to-peer networking)*
One device acts as the GN, and others function as PANU devices. These computers can visit each other or use an application based on TCP/IP.
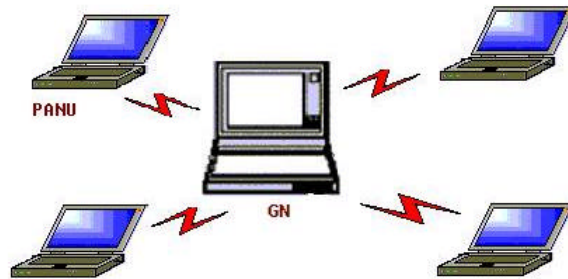
Figure 1: Group Ad-hoc Network

. *Access a LAN via a Network Access Point (or a Computer Acting as a NAP)*
After the computers connect to the NAP, they become members of the LAN and can directly communicate with other computers in the LAN.

Figure 2: Access a LAN via PAN-NAP

Connecting the PAN User (PANU)

Step 1: Connect to the server's Personal Area Network service, following the instructions in Chapter 2.

Step 2: Wait a few seconds for BlueSoleil to obtain and display your computer's IP address.

Configuring the NAP/GN

Click *Bluetooth* Service | Properties and click on the Personal Area Network tab.

Scenario 1 :Group Ad-hoc NetworkSelect Set up *Bluetooth* Personal Area Network and Enable DHCP Server (Figure 3).
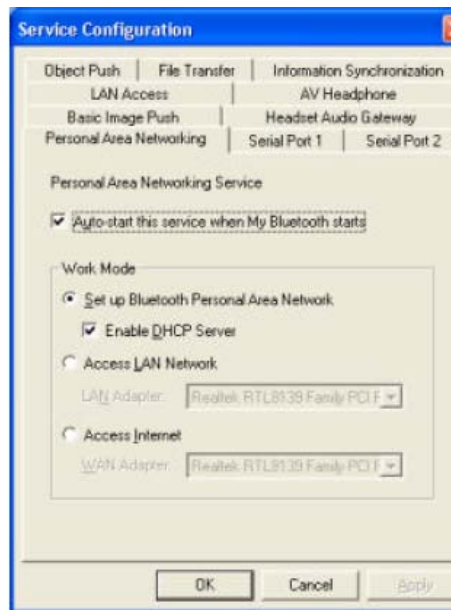
Figure 3: Set Up a *Bluetooth* Enabled Personal Area Network

A DHCP server will be started on the GN . The PANU can obtain an IP address automatically from this DHCP server if the PANU does not set static IP address for the BT Network Adapter.

Bluetooth®

Scenario 2 :Access LAN via PAN-NAPSelect Access LAN Network and select a physical network adapter, through which the NAP connects to a LAN, as the LAN Adapter (Figure 4).
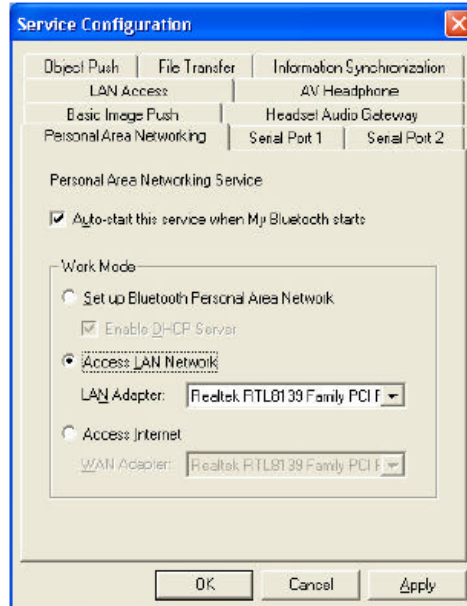
Figure 4: Access a LAN Network via a PAN-NAP

Scenario 3: Access the Internet via NAP Select Access Internet and select a physical network adapter, through which the NAP connects to Internet, as the WAN Adapter (Figure 5). It will automatically enables NAT (Network Address Translation, please refer to Windows Help Topic) function and a DHCP server.
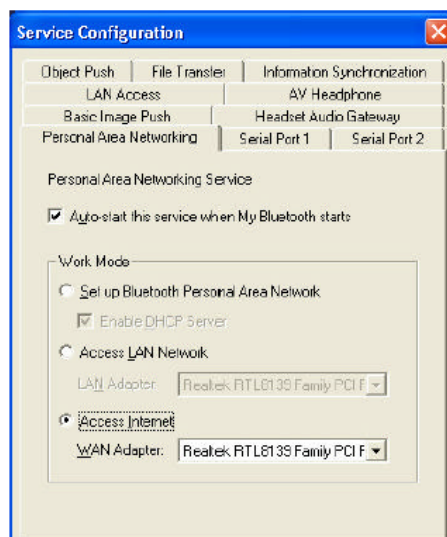
Figure 5: Access the Internet via a NAP

*Note: The BT Network Adapter on the PANU side must be set to
obtain an IP address automatically. The IP address is in the
form of 192.168.2.xxx, such as 192.168.2.1.*

3.11 Printer

The *Bluetooth* Printer Profile (HCRP) enables your computer to connect to a
Bluetooth enabled printer.

Typical Usage
 . *Print documents on a Bluetooth enabled Printer.*

Step 1: Connect to the printer's printer service.
(a) If your computer does not have the correct printer drivers installed, BlueSoleil
will prompt you to do so. Install the driver for the printer, and remember to set the
printer port to the correct COM port number. To determine the correct
COM port number, in the Main Window, right-click on the device icon. In the
pop-up menu, select Status.
(b) If the printer driver has been installed, a message indicates that the printer is
ready.

Step 2: Print documents using the *Bluetooth* enabled printer. In the application, be
sure to select the correct printer and printer port.

3.12 Serial Port

The *Bluetooth* Serial Port Profile (SPP) provides PCs, laptops, PDAs, GPS
receivers, cordless serial adapters, and other *Bluetooth* enabled devices with
a virtual serial port, enabling them to connect with each other wirelessly via
Bluetooth instead of with a serial cable.

BlueSoleil supports four *Bluetooth* Serial Ports for outgoing connections and
two *Bluetooth* Serial Ports for incoming connections.

Typical Usage
 . *Connect to other Bluetooth enabled devices via the Serial Port*
Connect to a PDA

Step 1: Connect to the PDA's Serial Port service, following the instructions in
Chapter 2.

Step 2: Use ActiveSync or any other application that uses a serial connection.

Note:
  . *Serial Port Auto-Connection function*
Once a target device is assigned to a specific serial port, (e.g., COM5), whenever an application opens that serial port number, BlueSoleil will automatically connect to the target device. Similarly, whenever an application closes the Bluetooth serial port, BlueSoleil will stop the connection. To check which devices are assigned to which COM ports, click Tools | Configurations | Connect With.

  . *Some applications only allow you to use a limited range of COM port numbers. If the application does not allow you to use a COM port number assigned by BlueSoleil, you will not be able to use BlueSoleil with your application.*

3.13 *Bluetooth* Synchronization

The *Bluetooth* Synchronization (SYNC) Profile enables users to synchronize PIM objects on their computer with that of other *Bluetooth* enabled computers as well as *Bluetooth* enabled mobile phones, PDAs, and other devices.

Four kinds of objects are supported:
  . *Contacts (*.vcf)*
  . *Calendars (*.vcs)*
  . *Notes (*.vnt)*
  . *Messages (*.vmg)*

Supported MS Outlook versions: Outlook 2000, Outlook 2002 (xp), Outlook 2003.

Typical Usage
  . *Synchronize your computer with a Bluetooth enabled mobile phone*

Step 1: Connect to the mobile phone's Synchronization service, following the instructions in Chapter 2.

Step 2: A synchronization dialog will appear (refer to Figure 1). Click on the Start button to synchronize. Contacts, calendars, notes and emails in MS Outlook will be synchronized with those on the phone.
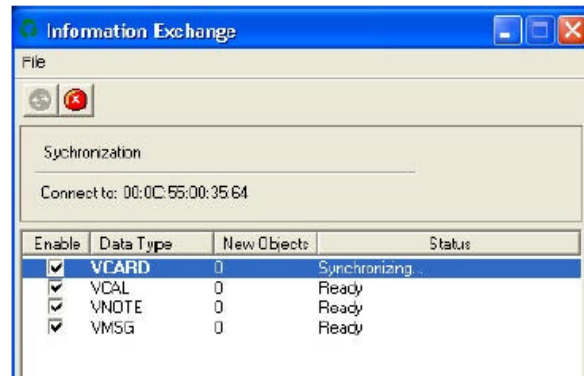
Bluetooth®

Figure 1: Start To Synchronize Information

Note:

. *Users can start synchronization from MS Outlook using the Bluetooth Add-In menus and buttons installed with BlueSoleil.*

. *BlueSoleil can act as synchronization server. Click My Services |Properties. Click on the Information Synchronization tab (Figure 2), and select the type of PIM objects that you would like to synchronize.*

4 BlueSoleil User Guides

4.1 BlueSoleil Environment

4.1.1 Main Window

The Main Window displays the local device (red ball) and the remote devices detected in range. Connecting and disconnecting operations are conducted here. Connections are indicated by green dashed lines between the local device and connected remote devices.

By default BlueSoleil starts with the Main Window open. To return to the Main Windows after switching views, click View | Main Window.

Local *Bluetooth* Device

The Local *Bluetooth* enabled device, known as "My Device," represents the user's computer that is running BlueSoleil.

Operations
. *Hover your mouse over the red ball to display the local device's Bluetooth name and address.*
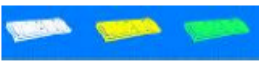
. *Click on the red ball to start or stop searching for Bluetooth devices in range.*

Right-click on the red ball to display a pop-up menu of related operations (e.g., General Inquiry, My Services, Security, etc.).

Remote *Bluetooth* Devices

Remote devices are other *Bluetooth* enabled devices that are in the radio range of your local device. BlueSoleil uses different icons to indicated different types of remote devices.

Personal Computer		Laptop	
Modem		Mobile Phone	
PDA		LAN Access Point	
Keyboard		Mouse	
Microphone		HiFi Audio	
Loud Speaker		Headset	
Printer		Scanner	
Fax		Camera	
Game controller		Server	
Unknown device			

Icon Meanings

Remote devices can be in any of three states, which BlueSoleil indicates with different colors.

- *White — Idle. The normal state of the device.*
- *Yellow — Selected. You have selected the device.*
- *Green — Connected. The device is connected to your computer.*

Operations

- *Single-click on the icon to select.*
- *Double-click on the icon to search for the services supported by the remote device.*
- *Right-click on the icon to display a pop-up menu of related operations (e.g., Refresh Devices, Pair Devices, Connect, etc.).*

Bluetooth

Bluetooth Service Buttons of Remote Device

Service buttons at the top of the Main Window represent a range of *Bluetooth* services potentially supported by Remote Devices.

PAN		DUN	
SPP		LAP	
FTP		SYNC	
OPP		HCRP	
HID		FAX	
BIP		AV	
Headset			

Icon Meanings

There are 3 states for the service icons, indicated by different colors.
- *White — Idle. The normal state.*
- *Yellow — Available. The Bluetooth service is available on the selected remote device.*
- *Green — Connected. The Bluetooth service is active in a connection with the remote device.*

Operations

- *Hover your mouse over the service icon to display the name of the service.*
- *Single-click on the service icon to connect.*
- *Right-click on the service icon to display a pop-up menu of related operations.*

4.1.2 Service Window

The Service Window displays the local *Bluetooth* services, (i.e., the *Bluetooth* services supported by BlueSoleil). Use the Service Window to start and stop services, as well as to configure service properties. To access the Service Window, click View | Service Window.

Local Service List

The Local Servic e List displays all of the *Bluetooth* services supported by the local computer. Use this screen to start/stop services.
Services Icons Services Icons

Services	Icons	Services	Icons
PAN		SPP	
OPP		FTP	
SYNC		LAP	
A2DP		BIP	
Headset AG			

Icon Meanings
There are 3 states for the local *Bluetooth* services, indicated by different icon colors.
. *White – Idle. The service has not been started.*
. *Yellow – Started. The local Bluetooth service has been started.*
. *Green – Connected. Some remote device has connected to the service.*

Operations
. *Single-click on the icon to select the service.*
. *Double-click on the icon to Start/Stop a service.*
. *Right-click to display a pop-up menu of related operations.*

4.1.3 Menus

BlueSoleil contains the following six menus:

. *File Menu*
. *View Menu*
. *My Bluetooth Menu*
. *My Services Menu*
. *Tools Menu*
. *Help Menu*

File Menu

Hide --- Hide the BlueSoleil window. Connections can still run when the window is hidden.
Always on Top --- Keep the BlueSoleil window always on top. Exit --- Exit BlueSoleil.
You can also exit BlueSoleil by right-clicking on the task tray icon at the bottom of your screen. In the pop-up menu, click Exit.

View Menu

Main Window --- Show the BlueSoleil Main Window.
Service Window --- Show the BlueSoleil Service Window.
Arrange Devices --- Arrange remote devices by Device Name, Device Address, or Device Type
Refresh Devices --- Refresh the list of remote devices detected by BlueSoleil.
Note: If you select Refresh Devices, the list of previously detected devices will not be cleared. To initiate a new device search that will first clear the list, press F5.

My *Bluetooth* Menu

Bluetooth Device Inquiry --- Search for other *Bluetooth* enabled devices in range.
Bluetooth Service Browsing --- Browse for the services of the selected remote device.
Security --- Configure the security settings of the local device (e.g., passkey requirements, data encryption, etc.).
Properties --- Configure the properties of the local device (e.g., device name, accessibility, etc.).

My Services Menu

Start Service --- Start the selected local *Bluetooth* service.
Stop Service --- Stop the selected local *Bluetooth* service.
Status --- View the status of the selected local *Bluetooth* service.
Properties --- Configure the properties of the local *Bluetooth* services (e.g., automatic connections, shared file locations, etc.).

Tools Menu

My Shortcuts --- Display dialog *Bluetooth* **Shortcuts**.
Connect: Connect the selected shortcut.
Delete: Delete the selected shortcut.

Find Device --- Click to find a device, by either of two search criteria:
By *Bluetooth* Device Address:

Bluetooth

Enter a *Bluetooth* device address, in standard format (xx:xx:xx:xx:xx:xx), and click on the Find button. The device with the specified address will appear highlighted in the Main Window.

By Name:
Check the By Name box, enter the Name of the device, and click on the Find button. The device with the specified name will appear highlighted in the Main Window.

Add New Device --- Add a remote device by entering its *Bluetooth* device address.

Add Device From History --- Add a remote device from the history list.
Add: Add the selected device.
Delete: Clear the selected device from the history list.

Configurations-> Connect With --- If desired, assign a remote device to automatically connect with a *Bluetooth* serial port whenever an application opens the specified port.
Assign: Assign a device to the selected port.
Remove: Remove the Auto-Connection device assignment for the selected port.

Configurations-> Unplug HID --- Remove Human Interface Devices from BlueSoleil.
Unplug: Unplug the selected HID device.
When you first connect the HID device to your computer, BlueSoleil sets up the devices so that they will automatically reconnect in case the connection is ever broken. After you unplug an HID device, it will no longer automatically reconnect to your computer.

Bluetooth Device --- Advanced hardware configuration, recommended for advanced users only. Please refer to 4.2 Hardware Configuration for more details.

Help Menu

Contents and Index --- Access BlueSoleil Online Help.

About BlueSoleil --- Information about your version of BlueSoleil.

4.2 Device Configurations

4.2.1 Hardware Configuration
BlueSoleil supports the following kinds of *Bluetooth* radio adapters: USB and CF card.

To access the hardware configuration screens, click **Tools | *Bluetooth* Device…**,

Bluetooth **Device**

Select the type of *Bluetooth* enabled device that you plan to use, either a USB adapter or a CompactFlash (CF) card.

Advanced Configuration

The Advanced Configuration page will be enabled only if you selected CF in the *Bluetooth* Device screen. Use the Advanced Configuration screen to configure detailed parameters including COM Port, Baud Rate, Byte Size, Parity, Stop Bits, and Flow Control.

4.2.2 Properties Configuration

To configure the properties of your local device, click **My *Bluetooth* Properties…**,

General

Device Name

The local device's name, which will be shown to other *Bluetooth* enabled devices.

Device Type

The device type of your local computer, (i.e., Desktop, Laptop or Server).

Device Address

The address of the local device. Every *Bluetooth* enabled device has a unique device.

Accessibility

Connecting Mode

Connectable: Permits other Bluetooth enabled devices to connect with your computer.
Non-Connectable: Prohibits other Bluetooth enabled devices from connecting with your computer.

Discovery Mode

General Discoverable: Permits other Bluetooth enabled devices to detect your computer.
Limited Discoverable: Permits other Bluetooth enabled devices to detect your computer with Limited Inquiry.
Non-Discoverable: Prohibits other Bluetooth enabled devices from detecting

your computer.

Bonding Mode (Pairing Mode)
 . *Accepts Bonding: Allow other Bluetooth enabled devices to pair with your computer. If the other device initiates a pairing procedure with your computer, each device must enter the same passkey before the they will be paired.*
 . *Does Not Accept Bonding: Rejects pairing attempts initiated by other Bluetooth enabled devices.*

Hardware
View information about your *Bluetooth* hardware.
 . *Manufacturer: The manufacturer of the local Bluetooth device.*
 . *HCI Version: The HCI version of the local Bluetooth device.*
 . *HCI Edition: The HCI edition of the local Bluetooth device.*
 . *LMP Version: The LMP version of the local Bluetooth device.*
 . *LMP Subversion: The LMP subversion of the local Bluetooth device.*

4.3 Security Configuration

Use the Security Configuration screens to specify the security settings of your local device.

4.3.1 Pair / Un-pair Devices

Once a remote device has paired with your computer by exchanging passkeys, passkeys will no longer be required for further connections between your computer and the device.

How to pair with another device

Automatically
If a passkey is required for connection, the devices will be paired automatically the first time they successfully exchange passkeys and connect. After a device has successfully paired with your computer, the remote device icon in the Main Window will have a red checkmark next to it.

Manually
In the Main Window, right click on the device icon, and in the pop-up menu, select Pair Device. In the Enter *Bluetooth* Passkey screen, enter the same passkey that you enter on the remote device. After a device has successfully paired with your computer, the remote device icon will have a red checkmark next to it.

How to un-pair with another device
In the Main Window, right-click on the devic e icon, and in the pop-up menu, select Unpair. The red checkmark next to the device icon will disappear.

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4.3.2 General Security

To access the security configuration screen, click **My *Bluetooth* | Security**…
Security Level

Low
If checked, other devices will be able to access your device freely without entering a passkey.

However, if the remote device requires a passkey to connect, then both devices need to exchange passkeys.

Medium
The medium level provides service level security. You can assign the appropriate level of access for each specific service. For more details, see 4.3.4 Local Services Security.

High
If checked, passkeys must be exchanged for every incoming and outgoing connection, unless the two devices have already paired in the past.

***Bluetooth* Passkey**

Set Default Passkey
Use this setting to create a default passkey for all connections. This saves you the effort of manually creating a passkey whenever one is required.

Data Encryption
Enable Data Encryption
If checked, the data transmitted will be encrypted.

4.3.3 Managing Device Pairings

To access the device security configuration screen, click My *Bluetooth* | Security and click on the Devices tab.

Paired Devices
This screen lists devices which have already paired with the local device.

Remove Pairing
Click to remove the pairing relationship between the selected device and the local device.

Authorization

Click to select the local *Bluetooth* services that you wish to allow the selected paired device to use. A list of local services will appear. Select the services you wish to allow on the remote device, then click OK.

. *Note:*
The screen will only list the local services that require authentication.
The local services that do not require authentication can be accessed freely.
. *The Authorization button is enabled only when the Security Level is set to Medium.*

4.3.4 Local Services Security

To access the local services security configuration screen, click My *Bluetooth* | Security and click on the Services tab. You can only configure security for localservices when the Security Level is set to Medium. (Set the Security Level in the General Security screen.)

Local Services:

Authentication

If checked, a passkey is required whenever a remote device attempts to connect with this service.

Encryption

If checked, data transmitted between devices for this service will be encrypted.

Authorization

Click to select the devices you wish to allow to use the selected service.

In the **Service Authorization** screen, enter the following settings:

Trusted Devices

Select to trust devices listed in this screen to use the selected service on your device.

A device can freely access the service from your local device when trusted. Click Add/Remove to edit the device list.

Trust all devices

Connection requests will be accepted from every device.

Prompt user if the device is not trusted for this service

If a non-trusted device attempts to access the service, a dialog will appear to allow you to accept or reject the connection.

<u>Reject devices from using the service if not trusted for the service</u>
If a non-trusted device attempts to access the service, the connection will be rejected automatically without informing the user.

Notes:
If a device is trusted for a service, it may connect to this service on your local device without informing you.

FCC Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. Notice: Any changes or modification not expressly approved by the party responsible could void the user's authority to operate the device.