

NetOp Remote Control

Control your desktop from your handheld, and your handheld from your desktop

by Raul Lucky

Remote Control Solution

High availability and accessibility of data from anywhere is a mobile professional's dream. With the advent of technologies such as remote desktop sharing and terminal services, Windows CE-based devices have come a step closer to mobile computing nirvana. **NetOp Remote Control** not only allows Windows CE-based devices to access desktop information remotely but also enables Windows CE hosting capabilities for remote controlling.

Two terms that any NetOp user must become familiar with are "host" (the NetOp-enabled device that waits to be controlled by a remote system) and "guest" (the NetOp enabled device that remotely connects to a hosting system for remote controlling purposes).

When using NetOp Remote Control to connect to desktop systems, advanced features become available to the user:

- 1) Remote script execution
- 2) File transfers
- 3) Text and voice chat sessions between host and remote systems

In addition, extended "Host Modules" are included:

- 1) NetOp Gateway: A NetOp host with the added capability of routing NetOp traffic between different communication devices.
- 2) NetOp Name Server: A NetOp host that has the ability to resolve names to IP addresses for fast and efficient connections.

NetOp has a plethora of features too vast to cover (the kit comes with three manuals that mainly cover the desktop/server options); therefore I will focus primarily on the Windows CE hosting and guest functions.

Installation

The installation procedures for both the hosting system and the guest are very intuitive. After installing both guest and host systems, NetOp Remote launches wizards to help the user set up program options.

Configuring a host has many options including:

- 1) Automatic host loading as a service at bootup. This feature is particularly useful for servers, especially when hosting always needs to be on regardless if a user is logged on to the machine or not.
- 2) The host window can be minimized at startup as well as hidden (stealth mode).
- 3) Connection notifications to alert the hosting system that a guest is currently connected to or is in the process of connecting to the hosting system.

Other functions such as remote printing, audio chat, and help request (a function similar to the Windows XP helpdesk feature) are only available when using the desktop version to act as the guest.

The guest software options on the Windows CE device are intuitive as well. Menu options in the Guest module include:

- 1) Connecting to a host machine
- 2) Communication method (TCP or UDP)
- 3) Graphics settings
- 4) Name server settings (to allow host name lookup on a NetOp name server)
- 5) A recent host list to quickly connect to previously connected hosts
- 6) A Send menu to emulate certain keystrokes to send to the NetOp host (e.g., Ctrl-Alt-Del, Ctrl-Esc, Alt-Tab, function keys, etc.)
- 7) Keyboard locking (to disable the keyboard on the NetOp host)
- 8) Screen blanking (to blank out the screen on the host)

Connecting to a NetOp host

My test setup consisted of the following:

- 1) A Pentium 4 desktop machine running Windows XP Professional
- 2) TCP/IP protocol running over a LAN connection
- 3) NetOp host installed and configured for launching on boot (running as a service) with password encryption enabled.
- 4) Jornada 728 Handheld PC 2000 and Compaq iPAQ 3870 connected to a LAN via wireless 802.11b network adapters

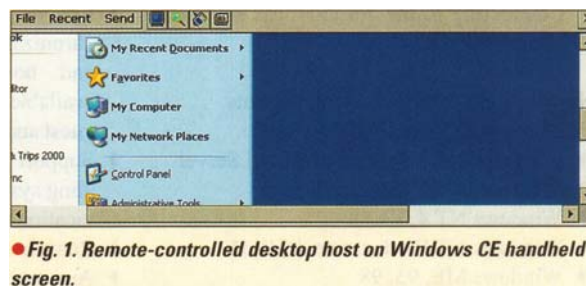
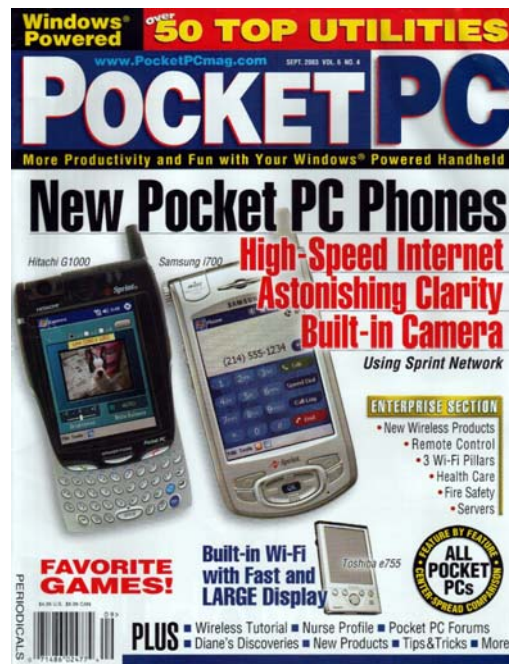
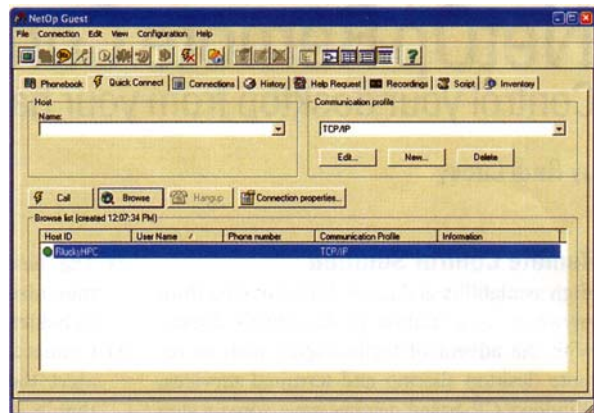


Fig. 1. Remote-controlled desktop host on Windows CE handheld screen.

After launching the guest, NetOp Guest required me to enter a host name to connect to. After entering the host name (an IP address would work as well), a NetOp Password Validation window appeared. I entered the password and about two seconds later, the desktop to my Windows XP machine appeared. Scroll bars on the right-hand and bottom sides of the screen allowed me to scroll up/down and left/right to view the entire desktop of the host on the guest's screen.

Maneuvering around the desktop was easy (even on the smaller Pocket PC screen). The interface is very reminiscent of pcAnywhere for Windows CE 2.11. A toolbar icon allows me to shrink the host's screen so that the entire desktop fits on the guest's screen. Another nice feature (similar to a feature that was available on pcAnywhere CE) is the toolbar icon that makes the host's screen fit the entire display and with the next screen tap zoom in to the selected location. The tap and zoom function seems to be the most practical solution for controlling desktops with high resolutions.

Navigating and controlling the host PC was smooth and not cumbersome. A right-click icon on the guest's toolbar simulates a right-click on the next screen tap. One thing I noticed about the guest interface was that the colors matched the color settings of the desktop host. NetOp automatically disabled my host desktop's wallpaper to speed up the connectivity between the host and the guest.



● Fig. 2. NetOp Guest Quick Connect Screen showing which Hosts are hosting on the network (in this case the HPC2000 device).

To configure the host settings on a Pocket PC or Handheld PC device, connect via ActiveSync and launch the Window CE Host Manager. The following settings can be configured:

- Start host at boot option
- UDP/TCP port selections
- Guest password setup
- Guest access security
- Program exit and stop host option

Any device running NetOp Guest can remotely control the Windows CE host. Connecting to the Jornada was seamless and instantaneous.

NetOp supports the following systems:

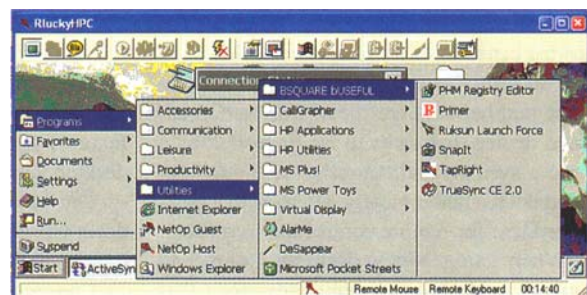
- Windows XP home/professional
- Windows 2000 Server/Advanced Server
- Windows 2000 Terminal Server
- Windows NT 4.0/3.51
- Windows NT Workstation 4.0/3.51
- Windows ME, 95, 98
- Windows CF
- ActiveX
- Linux
- Solaris
- Symbian

Another feature that makes NetOp very dynamic is its ability to operate over various communication protocols:

- APPC (OS/2 only)
- Gateway (NetOp proprietary)
- IrDA (Windows only)
- IPX
- ISDN (CAPI)
- TCP/IP (TCP)
- TCP/IP (UDP)
- Terminal Server (NetOp proprietary)
- Windows modem (Windows only)

I was quite amazed at how seamless and easy it was to get a desktop/server remote control solution up and running within 15 minutes of opening the package. For enterprise level rollout and management, NetOp Remote Control provides the necessary tools to grow with your needs:

- Security. Various levels of security can be implemented to provide secure communications over a LAN or WAN.
- Centralized management of all NetOp hosts (via a NetOp Name Server), to ensure efficient, reliable and easy connections.



● Fig. 3. An HP Jornada 728 being remote controlled.

- Secure gateway connections for routing information to various Internet/ intranet connected devices.
- Simple and intuitive interface. Easy to setup and use. Central rollout of NetOp hosts and guests eases application rollout and distribution.
- Helpdesk options that seamlessly integrate with host systems. Users can submit a helpdesk request to allow remote guests to connect and troubleshoot technical issues Audio and text communications can be enabled during a guest and host connection session.
- Session connection logging and recording for historical, reference or auditing purposes.
- File management and synchronization between guest and host systems (not available for Windows CE guest and host systems).
- Support for multiple operating systems and communication protocols.
- Remote system auditing.
- And much more!

NetOp Remote Control is a dynamic and scalable solution for your business or personal needs. Product and purchase information can be found at www.NetOpUSA.com.

Comparison

Other applications provide similar functionality and are available for Pocket PC and Handheld PC applications.

Application	Manufacturer	URL	Remote Control PC?	Remote Control Pocket PC?
NetOp Remote Control	NetOP	www.netop.com	✓	✓
Pocket Controller	SOTI	www.soti.com		✓
Dot Pocket	DOT Pocket	www.dotpocket.com		✓
Remote Control For Windows CE	Microsoft	www.microsoft.com/mobile/handheldpc/downloads/powertoys.powtoy10.asp		✓
VNC	Virtual Network Computing	www.uk.research.att.com/vnc/	✓	
Terminal Server Client	Microsoft	www.microsoft.com	✓	
pcANYWHERE CE	Symantec	www.symantec.com	✓	
Virtual CE	Bitbank Software	www.bitbanksoftware.com		✓

Most applications listed above are primarily for remote control of Pocket PC/Handheld PC devices. Communication methods that are supported are TCP/IP, IrDA, USB, and serial. Bluetooth may be an option but I haven't had the chance to test this. Other nice features include the ability to provide "virtual skins" for the PC remote control interface, thus giving the user a visual of an actual Pocket PC device on their PC desktop. Screen rotation, snapshots to image files (or printers), macro recording and screen resizing are features that are also available. So far, NetOp Remote Control is the only solution that allows remote control of hosting PCs and Pocket PCs.

Raul Lucky is an IT Manager and Network and Systems Analyst. He is a happy husband, married to Caryn, and a happy father to his son, Lucien. He enjoys cooking, reading, his pets (his other children), and rock climbing. Raul's Jornada 720 site is at www.geocities.com/roosterlucky/jornada720.htm. You can contact Raul at roosterlucky@yahoo.com.

