

# PNMX\_Installer

## User Guide

Version 1.0

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## **Introduction**

The PNMX\_Installer handles all of the install tasks for all PocketNumerix products and subscription services. The installer has a small footprint (304KB), so it can be downloaded quickly, even by dialup customers. Once the target device (must be a Pocket PC 2002 or newer) is connected to the desktop computer, the installer queries it for parameters that facilitate integrated download and product registration. The installer requests only the specific binaries needed by your device and nothing else. This approach vastly reduces the size of the installer and the bandwidth required to accomplish the installation. Consequently it's faster than the standard all-in-one, multi-platform approach. In fact, it's gobs faster! That's a technical term, like a google, but smaller.

## **Product Licensing and Delivery**

There is no opt-in for product registration - after installation, you're just done. The good news is that you're entitled to reinstall and/or upgrade software to the same device for as long as you can keep it running. The bad news is that you can't transfer the license or software to another device, so you should be sure you want the software running there before you install it. This applies at an order-item level of granularity. For example, suppose that you have two Pocket PCs - one running Pocket PC 2002 (PPC02) and the other running Windows Mobile 5 (WM5) and you want to install BondManager (BM) and StrategyExplorer (SX) on the PPC02 and NillaHedge (NH) and YieldCurveFitter (YCF) and any associated subscriptions on WM5, but you inadvertently included all software on the same order. If you're not overly impetuous, you can sort it all out at installation time. Assuming that you start out installing software on the WM5 device, you simply deselect the products intended for PPC02 device (SX and BM in this example), leaving only NH, YCF and any associated subscription services, and allow the installation to proceed.<sup>1</sup> When it completes, you simply disconnect the WM5 device and connect the PPC02 device. This time you would deselect the products and subscription services previously installed on the WM5 device (they will no longer download or install to any other device) and let the remaining products install. People that share software with their friends will not appreciate the licensing and delivery scheme, but we think everyone else will appreciate the free upgrades for the life of the device.

## **More About the Installer**

The installer displays the icon for each of the product components while they're being installed - that's so you'll recognize them later. Other than that, the installer is deliberately non-graphical because a few artsy pictures could easily double the installer's size (or much worse), but also because they 'make' you watch, thinking there might be something important for you to do or read, when in fact it's usually nothing more than self-promotion, ads, and superfluous entertainment intended to obfuscate the mind numbingly lengthy installation process when multi-platform install files are used. The PNMX\_Installer also offers no handy product usage tips that you'd probably forget anyway; and there's nothing to configure except which products you want installed. That's largely because customers very infrequently modify the target directories, yet everyone has to click through them. The install directory is Program Files\PocketNumerix and the document directory defaults to My Documents\PocketNumerix,<sup>2</sup> both are very unlikely to conflict with any other software. We're hoping you'll appreciate the streamlined install process more than you'll miss the flexibility to specify the directory names.

The installer was signed by PocketNumerix, Inc. on Friday, November 30, 2007 at 10:01:44 PM with a certificate issued by UTN-USERFirst-Object.

## **Prerequisites**

- 1) Installation requires use of a Windows desktop or laptop PC with an active Internet connection. If you have a DSL or cable connection and your modem has the usual lights illuminated, you're probably all set. If you have a dialup connection, be sure to establish a connection to facilitate the install.
- 2) Device specific binaries have been created for the following target devices.<sup>3</sup>

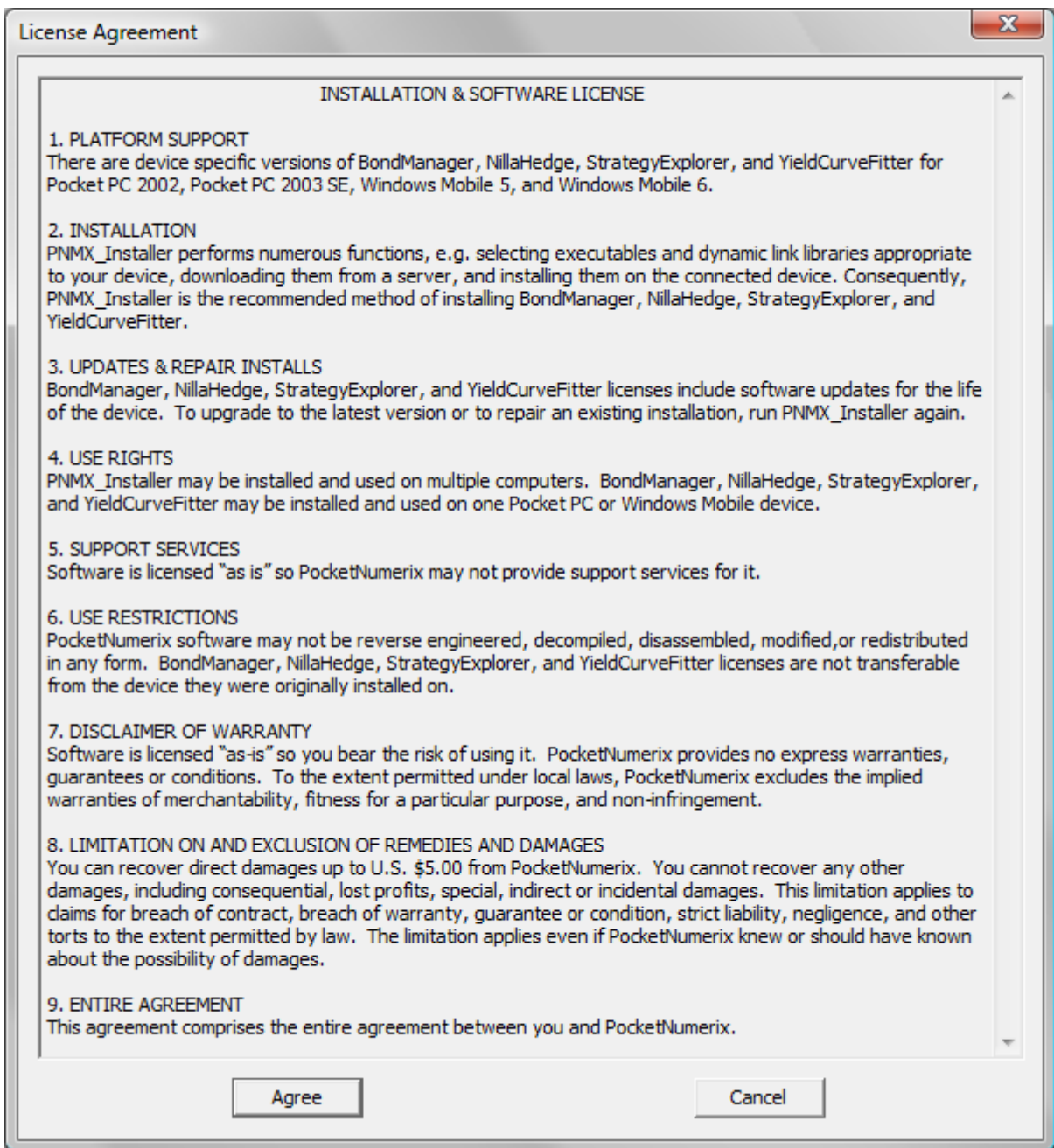
Windows Mobile 6	Pocket PC 2003 Second Edition
Windows Mobile 5	Pocket PC 2002
- 3) The Pocket PC must be cradled and the cradle connected to a desktop machine to complete the install.

## **Installation Process**

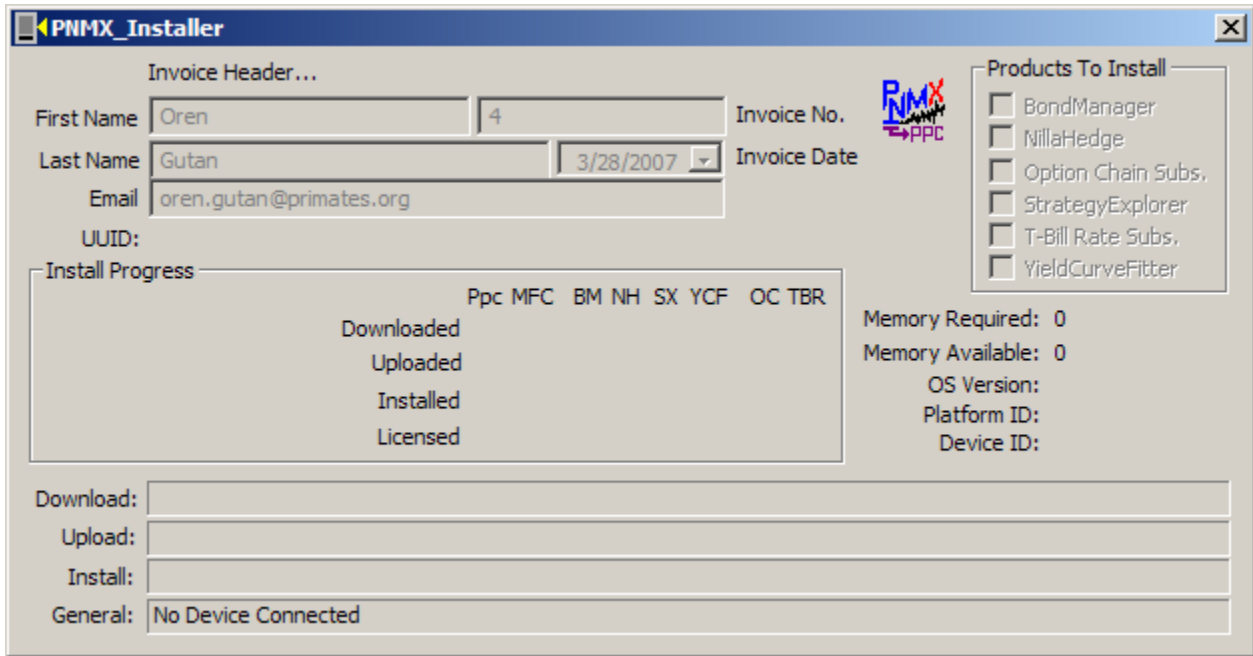
### **Preparing to Install**

Installation of all products and/or subscriptions is fairly straightforward. To prepare, you should:

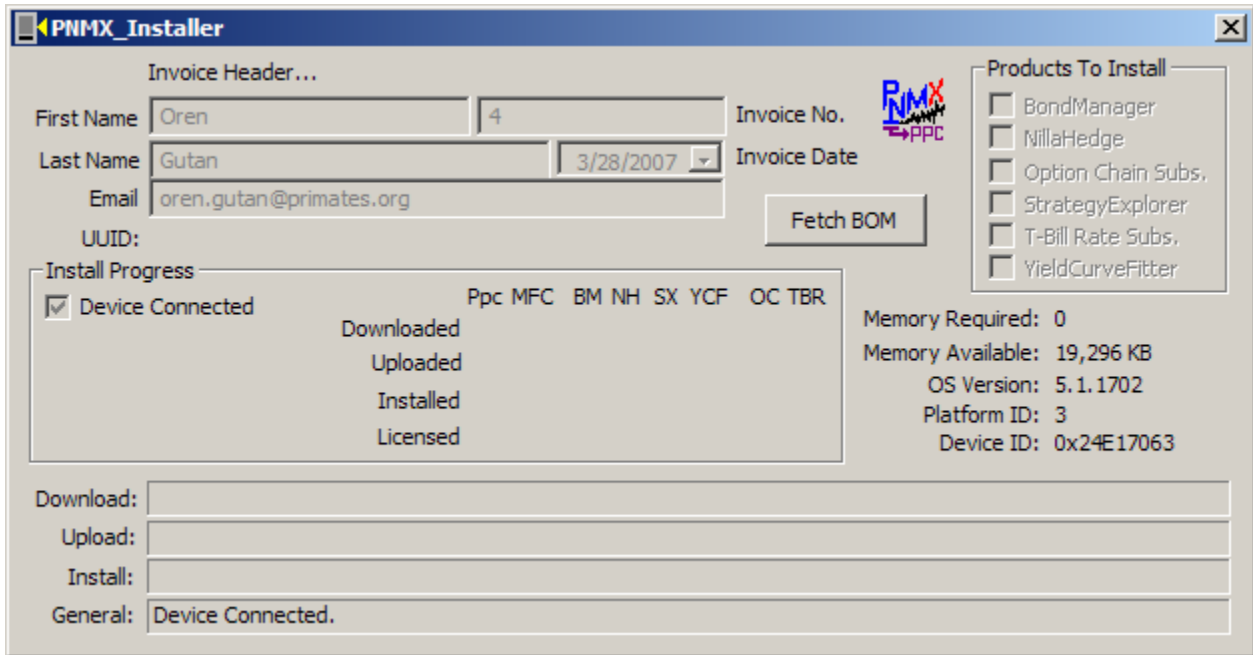
- 1) Download the installer from: [http://pnmx.com/Downloads/PNMX\\_Installer.exe](http://pnmx.com/Downloads/PNMX_Installer.exe) and save it to the directory of your choice.
- 2) Copy the install token that was attached to your order confirmation email into the directory where you just downloaded the installer. Be sure that the file is still named 'PNMX\_InstallToken' - the installer looks for a file with that name.
- 3) Start the installer (e.g. by double clicking the icon).
- 4) This is where you get the obligatory software license dialog...



5) Most of the real work is done on a screen that looks something like the one below, except that your name, email address, and invoice number will be displayed where Oren Gutan's information appears here.



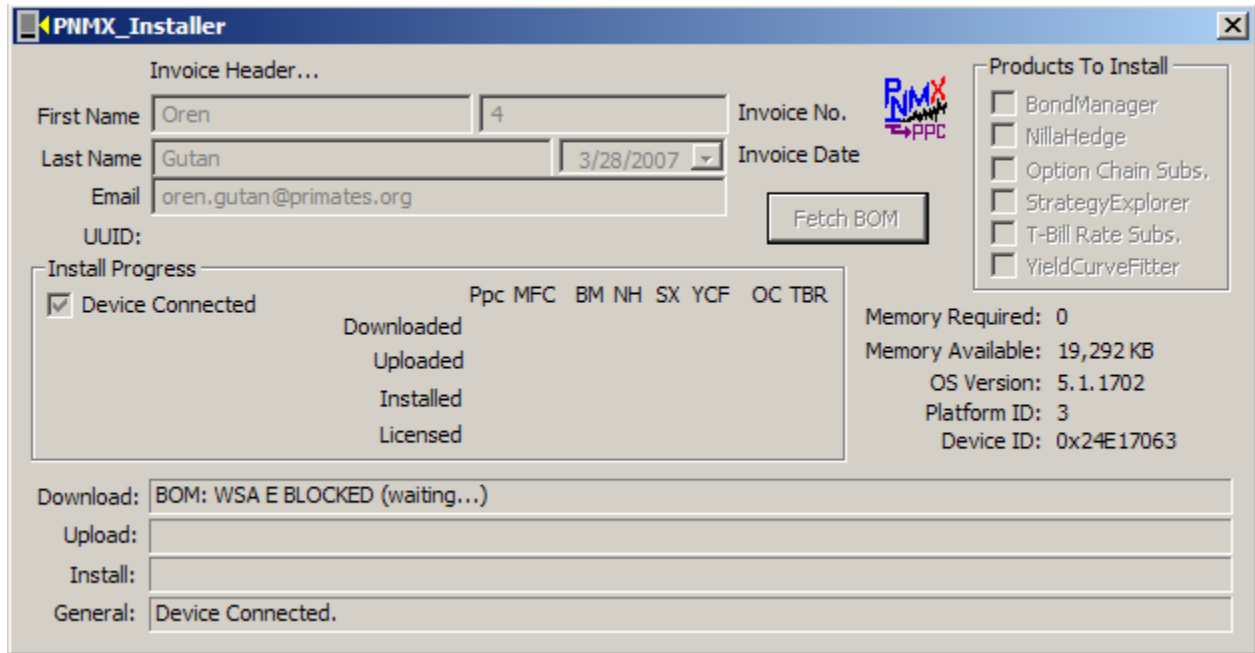
If you've already cradled the target Pocket PC and connected the cradle to the desktop machine you'll see a bit more information - something like the screen shot below. If you haven't done so yet, you won't be able to get any farther. After the device is connected, you can see a bit of information about the connected device.<sup>4</sup> Note that *Memory Available* in the device is indicated on the right, along with the *OS Version*. If all goes well, the *Fetch BOM* button will appear (as in the next screen shot).



## Fetching the Bill-of-Materials

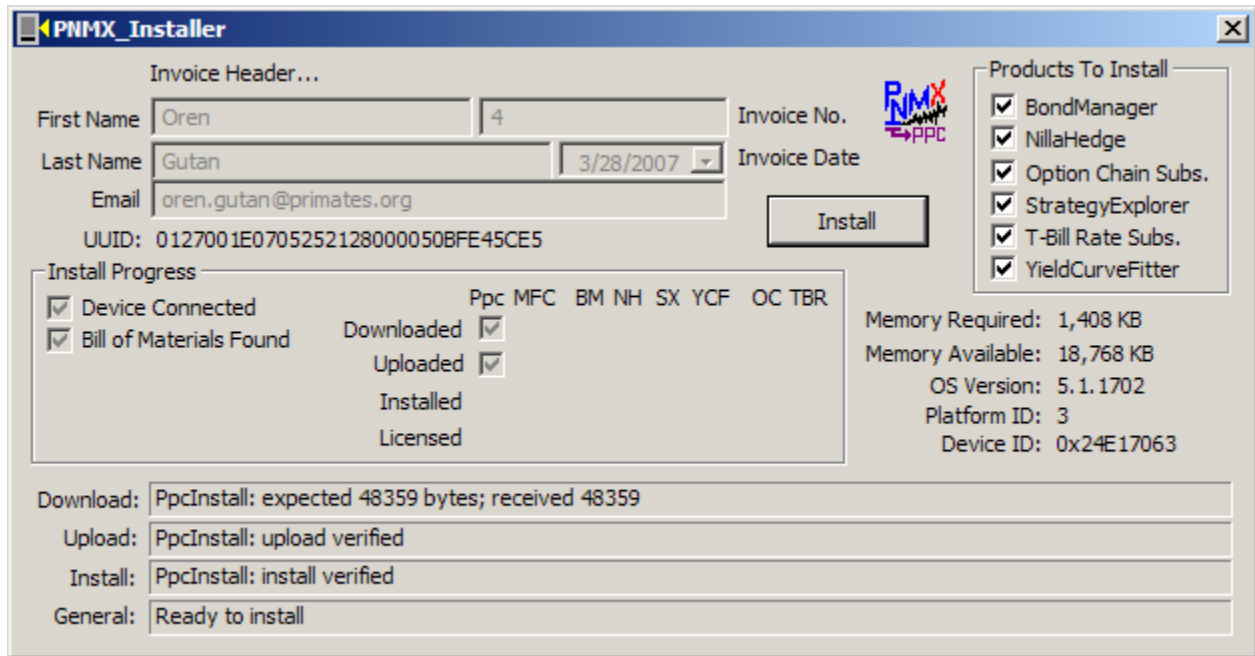
Upon clicking the *Fetch BOM* button, the installer attempts to retrieve the Bill-of-Materials (BOM) associated with your order, tailored to the operating system of the cradled device. Given that this is the installer's initial contact with the server, there is typically a longer delay than you'll observe in subsequent operations. You will

usually see the Download status area indicating that the installer is ‘waiting...’ on the server regarding your BOM request. A status of WSA E BLOCKED would normally be bad news, but in this case it (usually) means that a synchronous connection blocked and the installer is now waiting on the server in asynchronous mode. It should take less than fifteen seconds to establish a connection. The installer gives up on its own after thirty seconds.



Assuming that your desktop machine is actively connected to the Internet, you will see a very brief flurry of activity associated with your request. From the point where the connection stops blocking, it will probably take just a few seconds to enable the products on your order in the *Products To Install* box - sometimes it's nearly instantaneous. In the next phase, it downloads and installs PpcInstall, the device resident installer component. Once it's complete, you should see a screen similar to the one below.

## Installing



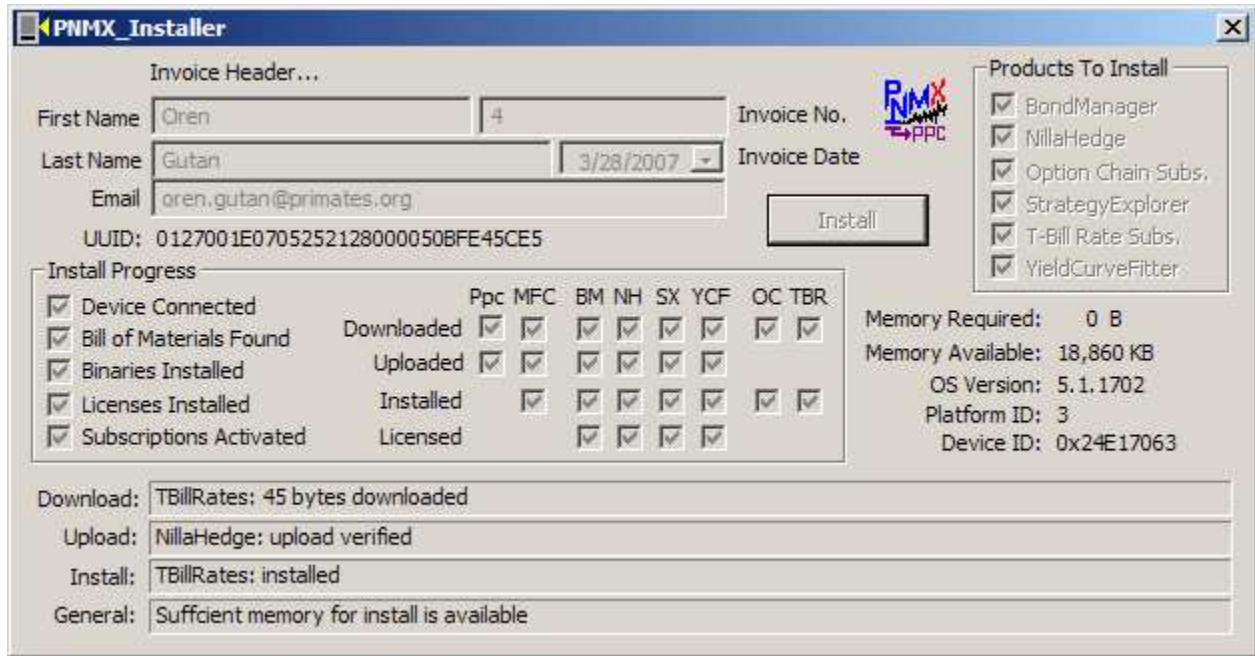
Naturally, if you didn't order every item on the menu, you won't have all of the product and subscription buttons enabled. But, other than that, some of the changes you may notice include:

- 1) Several of the status areas at the bottom of the dialog display breadcrumbs from the recent intermediate operations.
- 2) The *Bill of Materials Found* checkbox in the *Install Progress* box indicates that the installer has captured the information it needs to proceed with the installation.
- 3) In the center of the *Install Progress* box, three checkboxes summarize the progress for the products and subscriptions on your order as well as one or two enabling binaries.
- 4) The device UUID should now be displayed above the *Install Progress* box.
- 5) All of the products on your order should now be enabled in the *Products To Install* box in the upper right corner of the installer dialog.
- 6) The *Memory Required* by all of the enabled items on your order is now displayed above *Memory Available*. You can enable and disable the products appearing in the *Products To Install* box and observe the *Memory Required* recalculate each time.<sup>5</sup>

Note: Applications targeting Pocket PC 2003 and Windows Mobile 5 series devices need to override the MFC DLL burned into ROM. When the MFC DLL override is needed, all four products (BM, NH, SX, and YCF) depend on it being present. Prior to installing any products, memory required by the MFC DLL is added into the memory required by the enabled products. After MFC has been installed, the installer knows it no longer needs to add MFC's memory requirement into the mix.<sup>6</sup> If you are installing to a Pocket PC 2002 or Windows Mobile 6 device, the MFC DLL in ROM works just fine, so an override MFC DLL is not required and the MFC DLL memory size isn't a factor.


## Install Complete

For many people the next step is probably clicking the *Install* button and going for a cup of coffee, in which case, the next screen you're likely to see (if you ordered everything on the menu) is analogous to the one below.



If you have a fast Internet connection, all four products and both subscription services will install in a minute or two. Note that the *Binaries Installed* and *Subscriptions Activated* check boxes indicate complete installation of the products and subscriptions enabled at the time you clicked the Install button. If you have multiple products on your order but only enabled installation of one of them, *Binaries Installed* will indicate completion even if uninstalled (but not enabled) order items remain. Subscriptions behave similarly - if you have two subscriptions on the order, but only enabled one for Install, *Subscriptions Activated* is checked when the enabled subscription completes the install process.

You may also notice that *Memory Available* and *Memory Required* amounts update after each product or component is installed with product and subscription checkboxes being disabled after each order item completes installation. Note that subscriptions display a *Download* and *Install* status, but no *Upload* stage. Technically, neither the subscription upload or install process is the same as it is for products – the subscriptions *Install* check box indicates completion, nothing more.

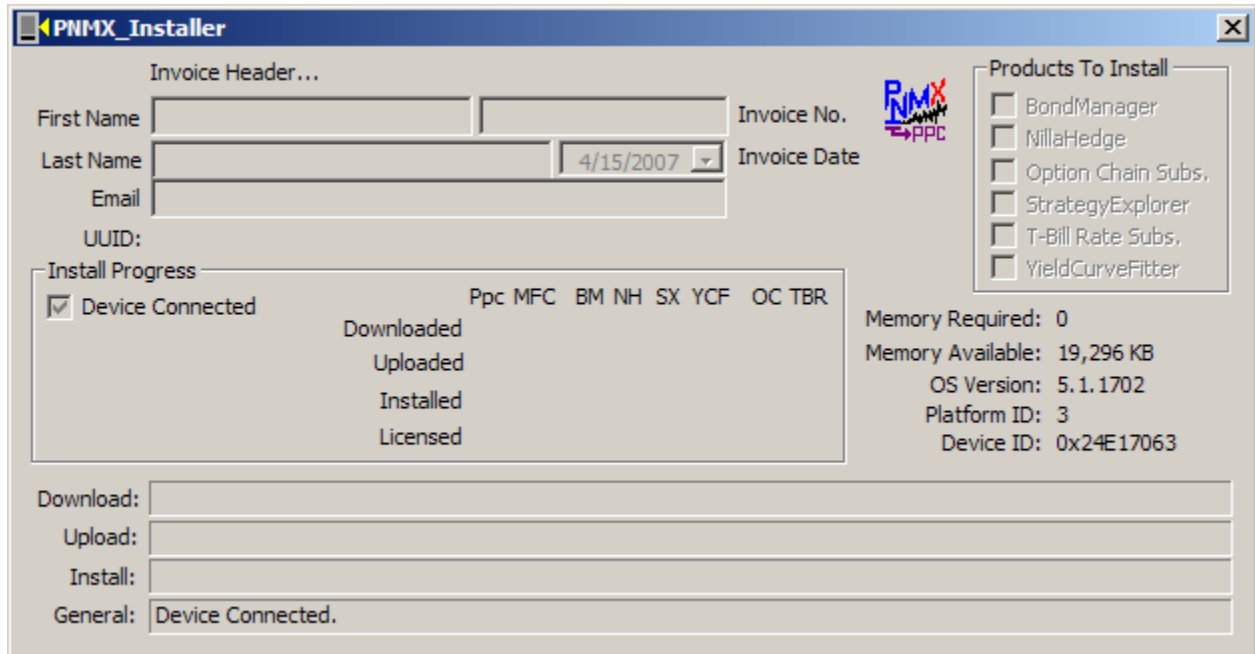
You're done! You exit the installer by clicking the close button (the  in the upper right hand corner of the dialog).

## Epilogue

It's prudent to retain the PNMx\_InstallToken so you can reinstall at will. It's relatively easy to keep your Pocket PC files backed up to your desktop machine using ActiveSync, but installed software is typically not backed up. Obviously, if you have your install token handy, reinstalling will be much less hassle.

## Troubleshooting

One screen you might encounter appears below – it’s characterized by all of the *Invoice Header* fields (except the *Invoice Date*) being empty. Even though the installer found a device connected to the desktop machine, it won’t be able to proceed with the installation, hence the *Fetch BOM* button does not appear. Please verify that you have the install token associated with your order in the same directory as the installer and be sure that it’s named ‘PNMX\_InstallToken’ (without the single quotes).



The screenshot shows the PNMx\_Installer application window. The title bar reads "PNMX\_Installer". The main window is divided into several sections:

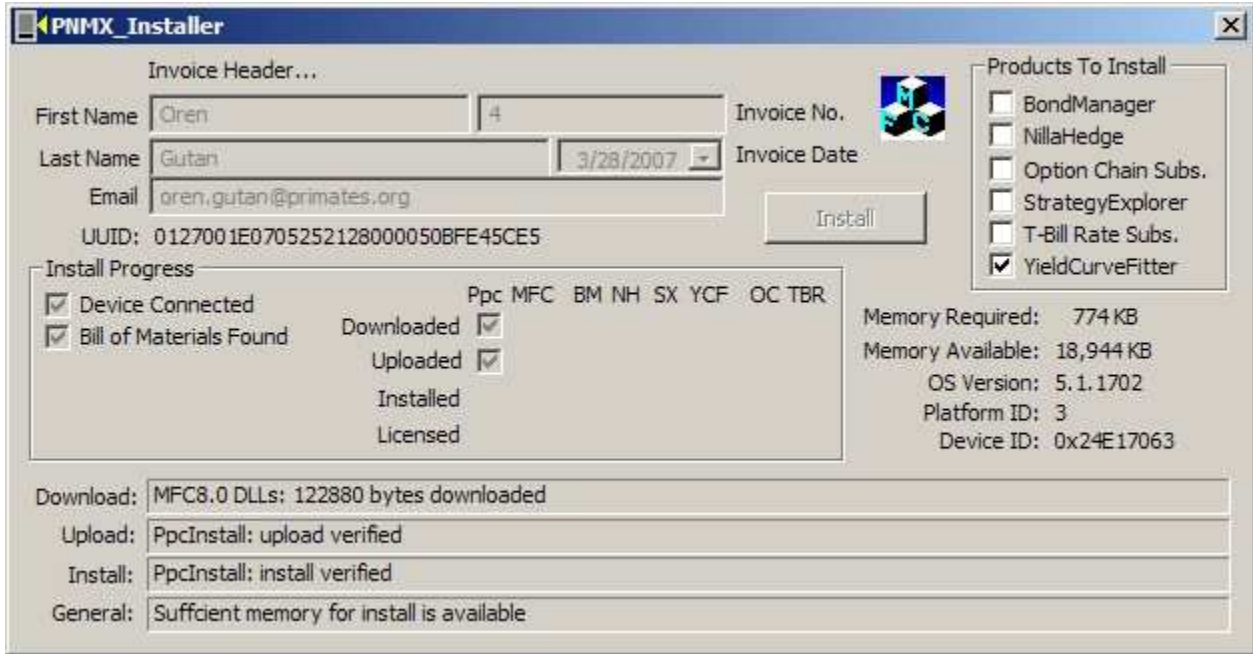
- Invoice Header...:** Contains fields for First Name, Last Name, Email, Invoice No., and Invoice Date. The Invoice Date field is populated with "4/15/2007".
- Products To Install:** A list of products with checkboxes:
  - BondManager
  - NillaHedge
  - Option Chain Subs.
  - StrategyExplorer
  - T-Bill Rate Subs.
  - YieldCurveFitter
- Install Progress:** A table showing the status of various components:

	Ppc	MFC	BM	NH	SX	YCF	OC	TBR
<input checked="" type="checkbox"/> Device Connected								
Downloaded								
Uploaded								
Installed								
Licensed								
- System Information:** Memory Required: 0, Memory Available: 19,296 KB, OS Version: 5.1.1702, Platform ID: 3, Device ID: 0x24E17063.
- Download:** An empty text field.
- Upload:** An empty text field.
- Install:** An empty text field.
- General:** A text field containing "Device Connected."

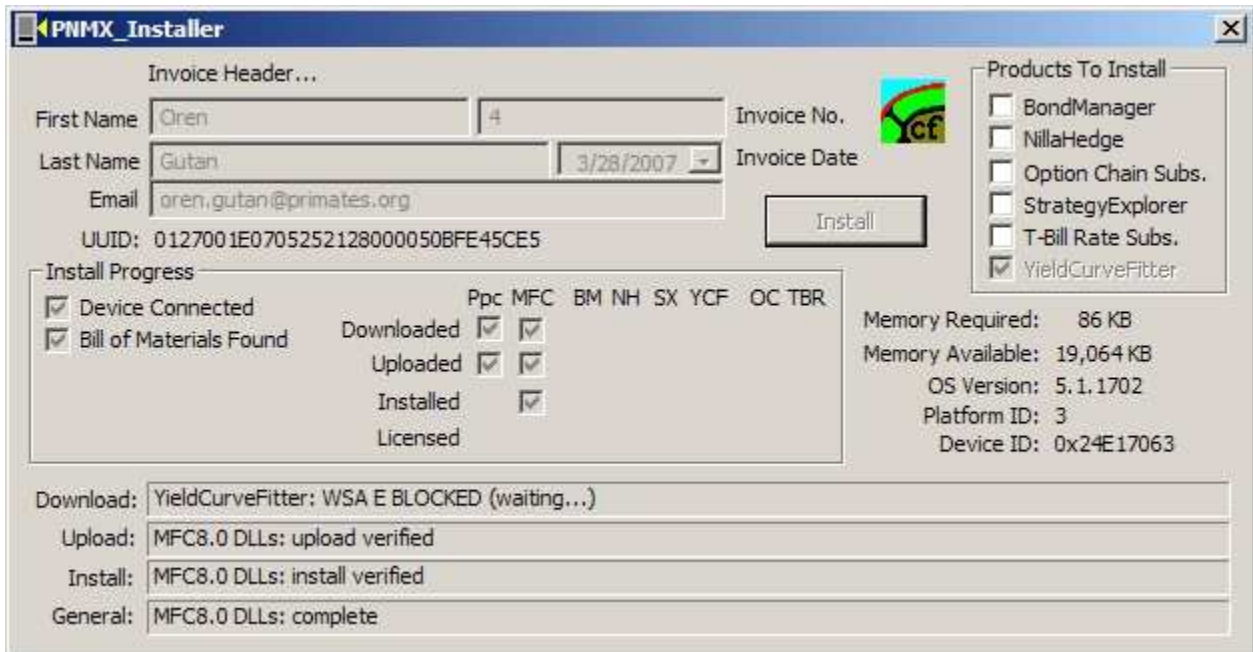
## Appendix

If you didn't install all of the order items at the same time, you might expect to see screens something like those that follow.

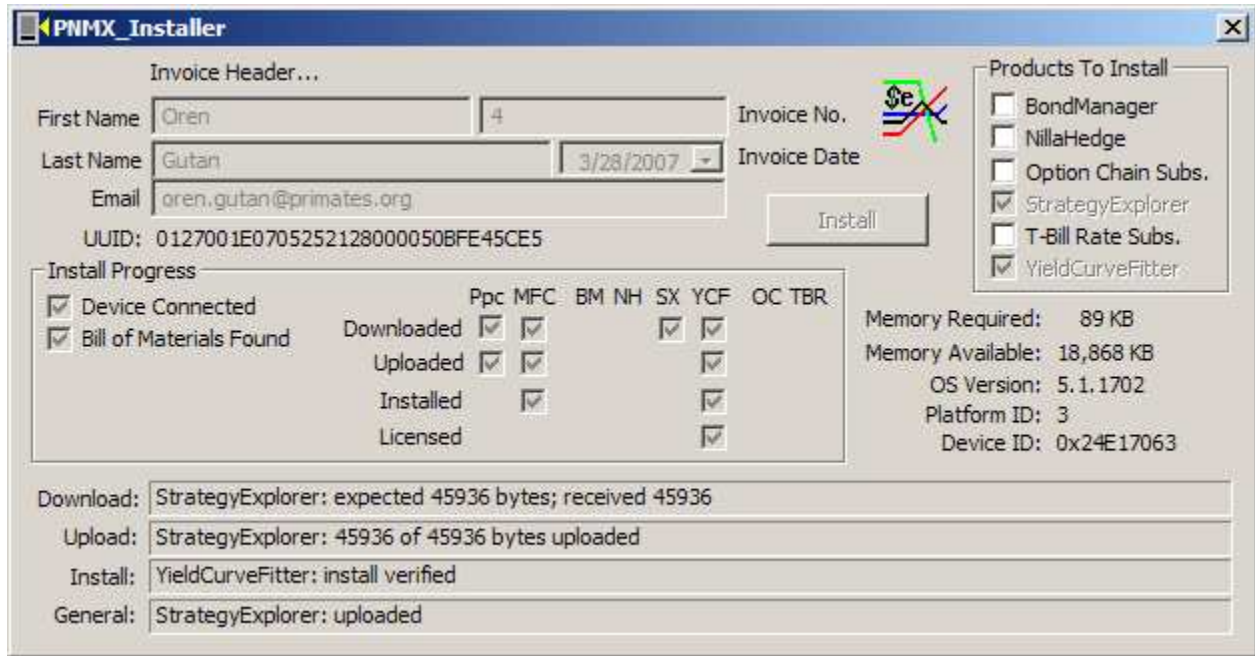
MFC downloading to support a YieldCurveFitter install.



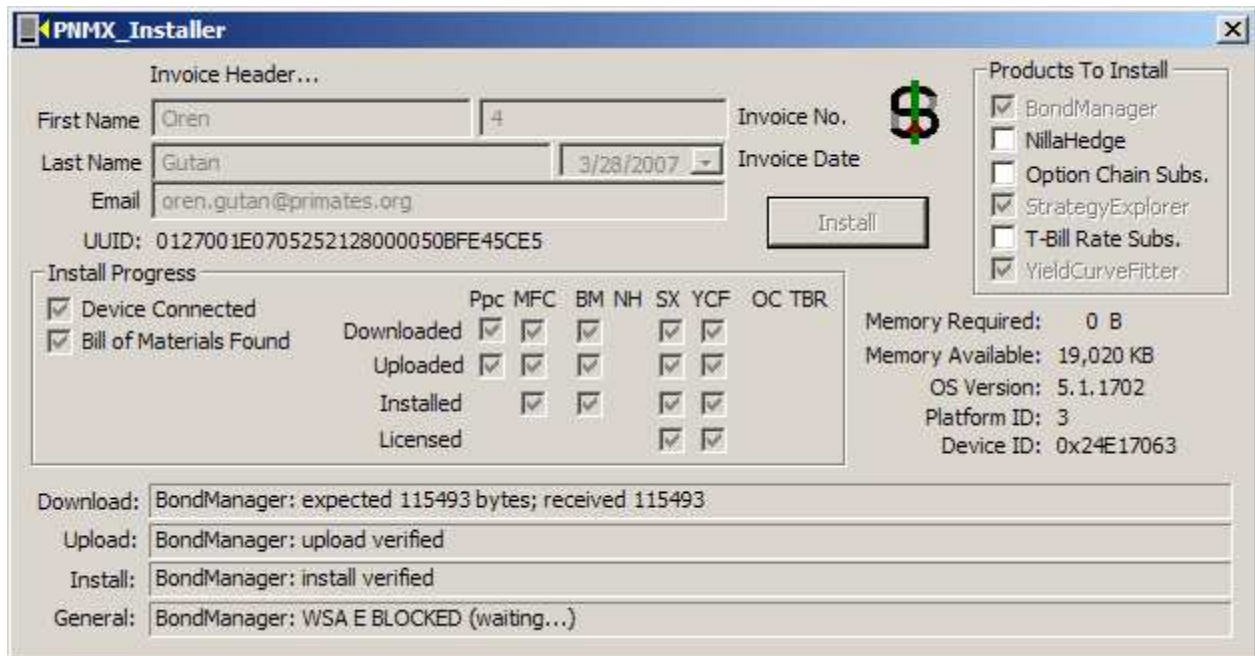
YieldCurveFitter download waiting for a connection after MFC was installed.



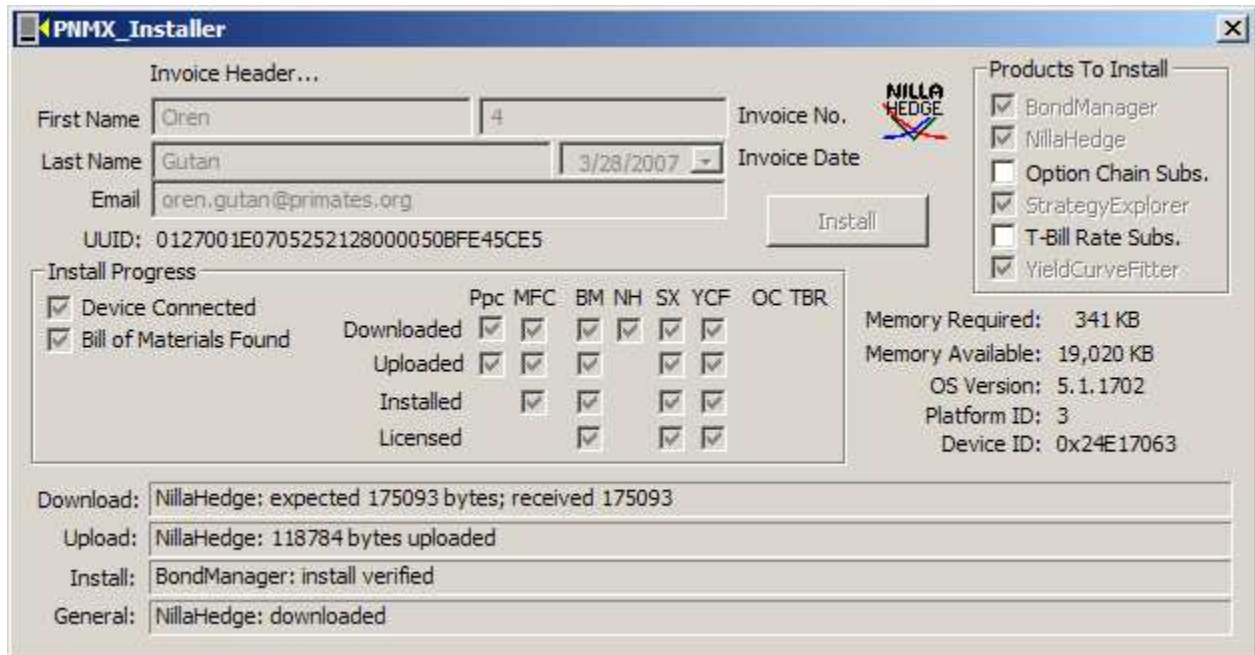
StrategyExplorer completely uploaded, but not yet indicating that upload is complete, after MFC and YieldCurveFitter were installed.



BondManager waiting for a license after MFC, YieldCurveFitter, and StrategyExplorer were installed.



NillaHedge uploading after MFC, YieldCurveFitter, StrategyExplorer, and BondManager were installed.



<sup>1</sup> The server associates products and subscription services with devices at the completion of download, so pulling the plug during upload will not prevent the device order-item association.

<sup>2</sup> The documents directory is actually controlled by a registry variable. If necessary, the document directory can be changed in the device registry.

<sup>3</sup> Palm, Blackberry, and SmartPhones are not supported due to historically smaller screen sizes, SmartPhones with faster processors and QVGA resolution (240x320) are now available, so they could be supported at some point in the future.

<sup>4</sup> You can recognize a Windows Mobile 5 device by an *OS Version* with a leading '5'. Pocket PC 2003 devices sport a leading '4' and Pocket PC 2002 devices have a leading '3'.

<sup>5</sup> The *Memory Required* is an estimate based on the CAB file sizes of the enabled products and the MFC DLL (if needed). Since compression rates vary from file to file, there's no way to accurately predict the actual install size without tracking meta data in addition to the CAB files themselves (which the installer doesn't do), so your mileage may vary.

<sup>6</sup> If you install one product on a PPC03 or WM5 device (thereby including the MFC DLL override) and subsequently restart the installer, you may note that the installer automatically reinstalls the MFC DLL all over again. In theory, the installer could keep track of a hash signature and/or a modify date for each file and then verify that the installed file still produces the same hash and/or modify date, but ... it just doesn't track that information right now - maybe in a future release of the installer.