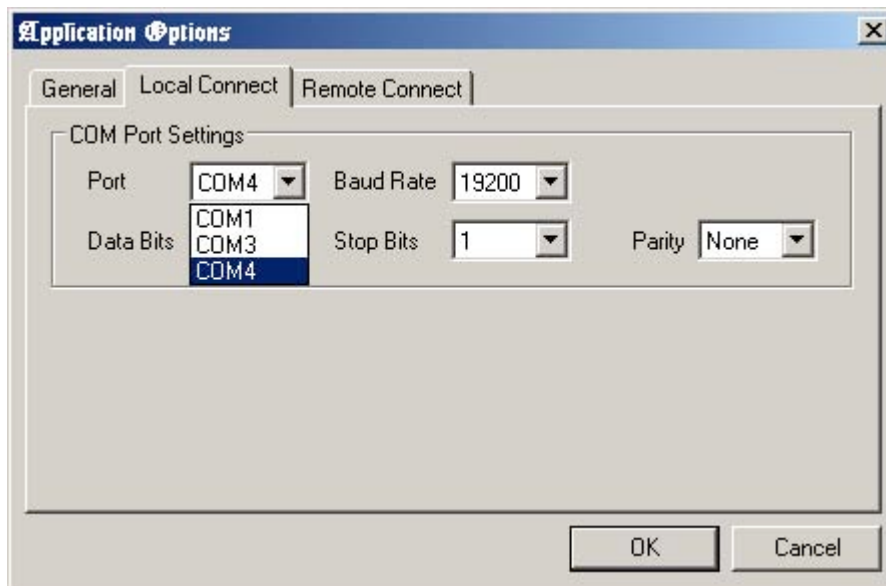


I. Connection to the system and Downloading of initial data

- A. The connection operation is the same as in previous versions of software where the user may select the online or remote connections to interface with the system.
- B. A few new features which have been added are:
 1. The communication port selection pull-down can now accommodate up to 20 communication ports, and shows only the communication ports available.

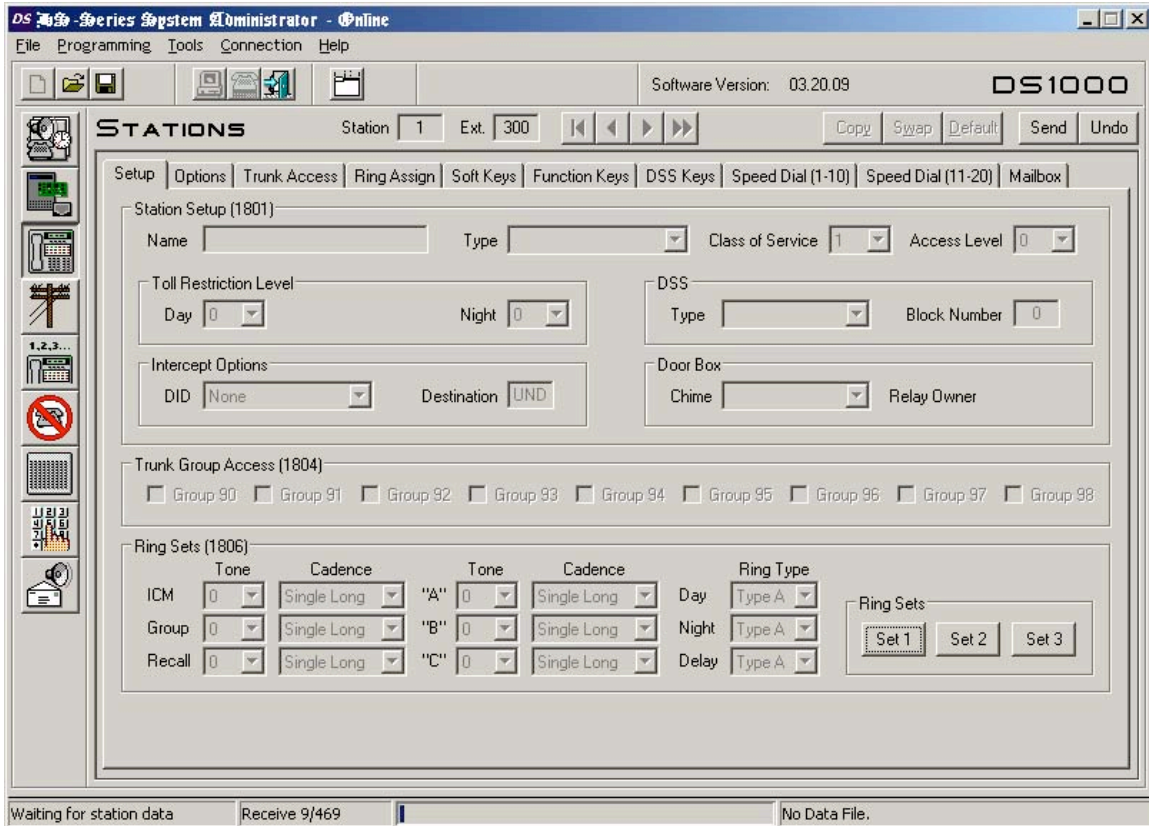


- a. A sub-feature to this is, if a communication port is available and the communication port is busy, it is still shown on the list, but if the user tries to connect to the system using that port, the software informs the user that the port is being used by another application, and that other application should be closed before communications with the system can be established using that port.
2. The View Log feature under the **Tools->Options** menu on the General tab allows the user to view the last communication session with the system and informs the user of any problems in the upload or download of data. Each program number listed in the Program column will represent a communication problem (not all serious), and the problem type will be listed in the Event column next to the program number column.

3. The software will now remember the password entered by the user if the Remember Password checkbox is selected. The password and checkbox values will be saved to the configuration file upon program exit, and the data will be read from the file when the application starts. The remembered password will be written into the Password field automatically when this option is active.



- C. New functionality when connecting to the system and a new way the system receives and transmits data.
 1. The software now connects to the system and immediately gets only the data it needs as a baseline to operate. This includes the entire System Numbering plan, the slot assignments, and the System Programming (so the first programming button's (System Button) data may be displayed when ready).
 2. Once this data has been received, the system now goes out and gets the data in a pre-defined manner, unless the user clicks on a specific navigation or program group button, and that data requested has not yet been received, the software will prioritize getting the requested data first and display the subject screen completely greyed out until that data has been retrieved from the system (as seen below).



- a. If the user let the program retrieve the data on it's own, the program goes out and gets the System data, the Toll Restriction Data, the Speed Dial Data, the **FIRST** Extension Data, the **FIRST** Trunk Data, the DSS data, the Voice Mail data, and finally the subsequent Trunk and Extension data in order (by port data group unless pre-empted by the user, so all 1001, 1003, 1004, 1005, 1006, 1701, 1703, 1705, 1801, 1802, 1803, 1804, 1805, 1806, 1807, & 1808 data for a specific port number is defined as a "port data group").
- b. If the user clicks on a specific program group, the software will prioritize the order of the data retrieval to get the requested data as soon as possible. If the software is downloading a certain program group, and the user clicks on another group, which has not been downloaded yet, the program will display the specific data group screen greyed out while the current downloading program group retrieval is finished and the requested group is retrieved. Once the requested group is retrieved from the system, the page will be refreshed with the newly received data on it.

- c. The specific navigation button mentioned above is any of the navigation or data manipulation buttons, in the Trunk and Station pages.
 1. The First, Next, Previous, or Goto buttons (when clicked) will check to see if the system data has been received. If it has, the navigation will be performed immediately; otherwise, if the data has not been received for any reason, the software retrieves the data for that port being navigated to and jumps to that port as soon as the data has been received.
 2. The Copy and Swap buttons will also check to see if the data for a port being copied from has been retrieved, if not these functions will get that data before any further action is taken.
 3. The Default button does not need to do this because the default button only works on the current port.
3. If the entire database is not completely received from the system, but the user has made changes to the available data and wishes to send those changes to the system, the user may simply click "SEND" right away, unlike having to wait until the upload or download processes are completed as in the single-threaded version of the system administrator. The currently downloading program group data or port data group (if any) will complete receiving, and then the receive process will be paused while the data requesting to be sent to the system will be transmitted. This data transmission being completed, the process of retrieving the rest of the system data not yet received from the system will recommence.

II. Operations once the initial connection and download are performed

A. New way to exit the connected mode.

1. If the user is either uploading or downloading data, there is now a way to stop the process and exit the communication mode without waiting for the entire database to be downloaded or uploaded.
 - a. Exiting on an active download can be accomplished by clicking the break connection button and a message box will ask the user if they would to **Terminate Now** or **Cancel** the Break Connection request. If the user selects the **Terminate Now** option, the program connection to the system will terminate as soon as the currently downloading program group or port data group is finished. Clicking **Cancel** will let the active download continue on uninterrupted.



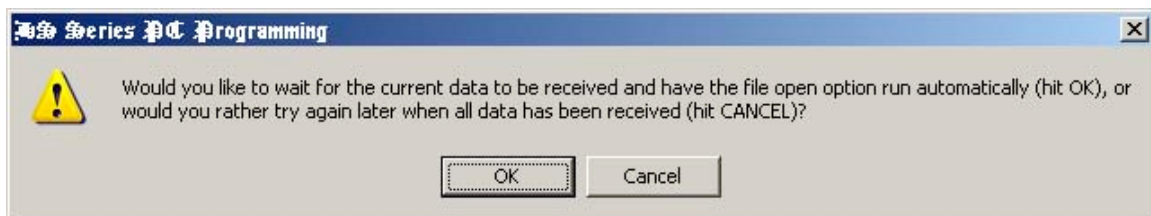
- b. Exiting on an active upload is a little different, but can still be requested by clicking the Break Connection button. When this is done while uploading, the user is presented with a message box which will ask the user if they would like to **Terminate Now**, **Cancel** the break connection request, or wait until the upload of the data is done (**Wait Until Done**). The **Wait Until Done** option will allow the upload of the data process to complete before breaking the connection with the system, otherwise the **Terminate Now** and **Cancel** options operate as mentioned in the break connection while downloading section.



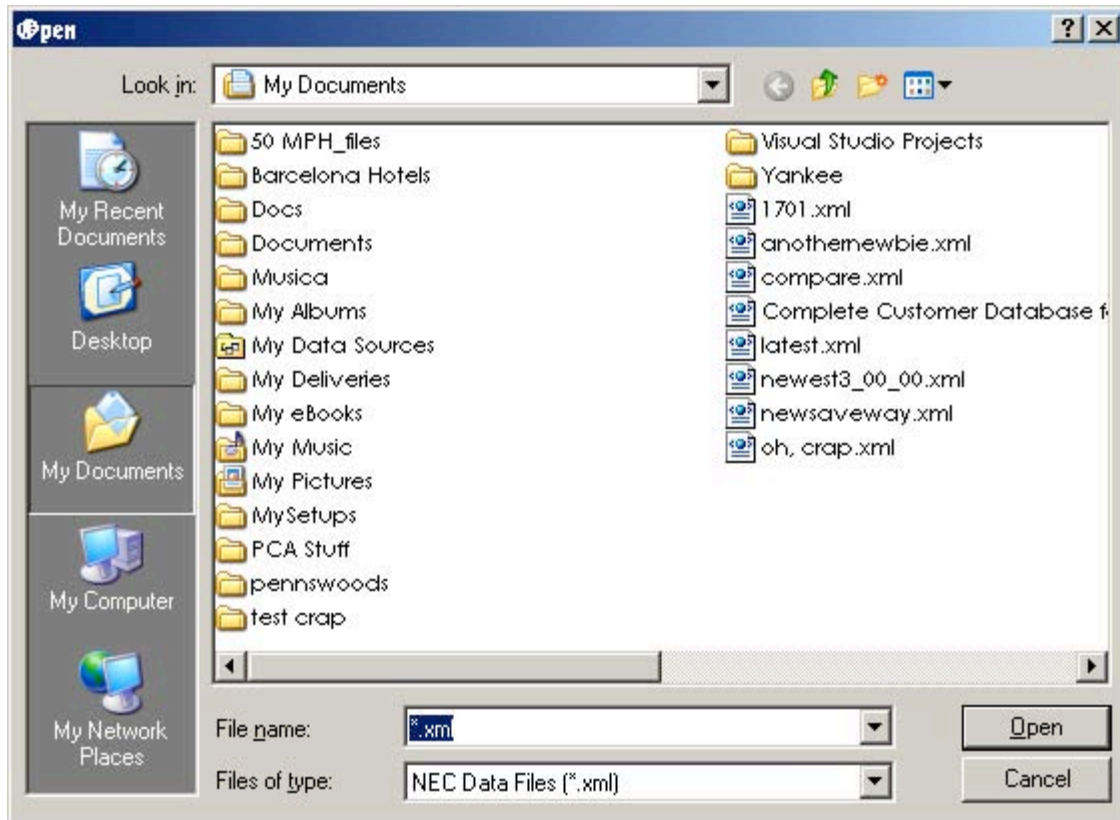
- c. Clicking the X-BOX (close box) in the upper right of the main dialog window will terminate the communication and close the entire program as soon as permissible. No warnings to the user are shown here (by design)!

D. Using the File Open and Save options

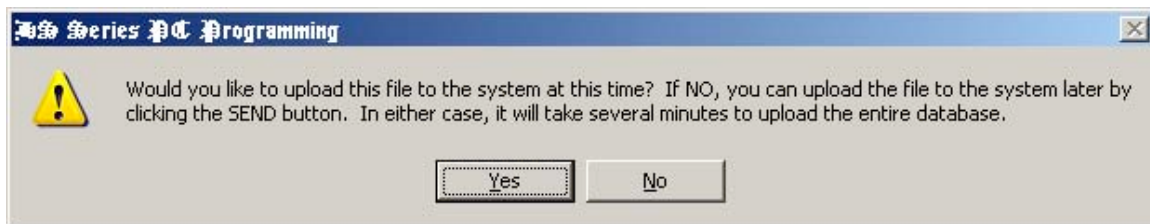
1. The File->Open and File->Save (As) options operate a little differently from how they did in the single threaded version of the system administrator.
 - a. The File-Open function on download
 - i. This will pre-empt the downloading of data as soon as possible and allow the data file to be opened and uploaded to the system. A dialog will be displayed asking the user if they would like the file open to run as soon as possible (click OK) or try again at a later time manually (click Cancel). (See figure below) Note: Once you hit OK in this message, the download is terminated (that's it no going back!). You cannot resume the download by hitting Cancel on a later dialog in this process. Hitting Cancel on this dialog will allow the download to continue.



- ii. If OK is clicked, as soon as the current program group or port data group has been downloaded, the file open dialog will appear (See figure below), and the current download shall be terminated. Otherwise, the user must initiate the file open action again manually, and wait for the entire download to finish, or (if it has not completed) select OK on the message box presented, if the download has not yet terminated.

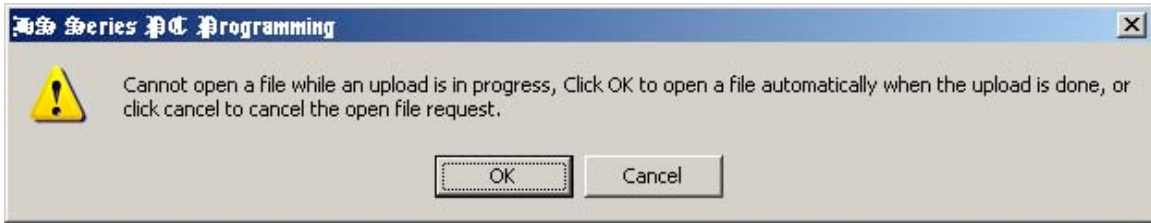


- iii. Once the data file has been read in, the program will ask if the user wants to immediately upload the data or upload it later by clicking on the SEND button. (See figure below)

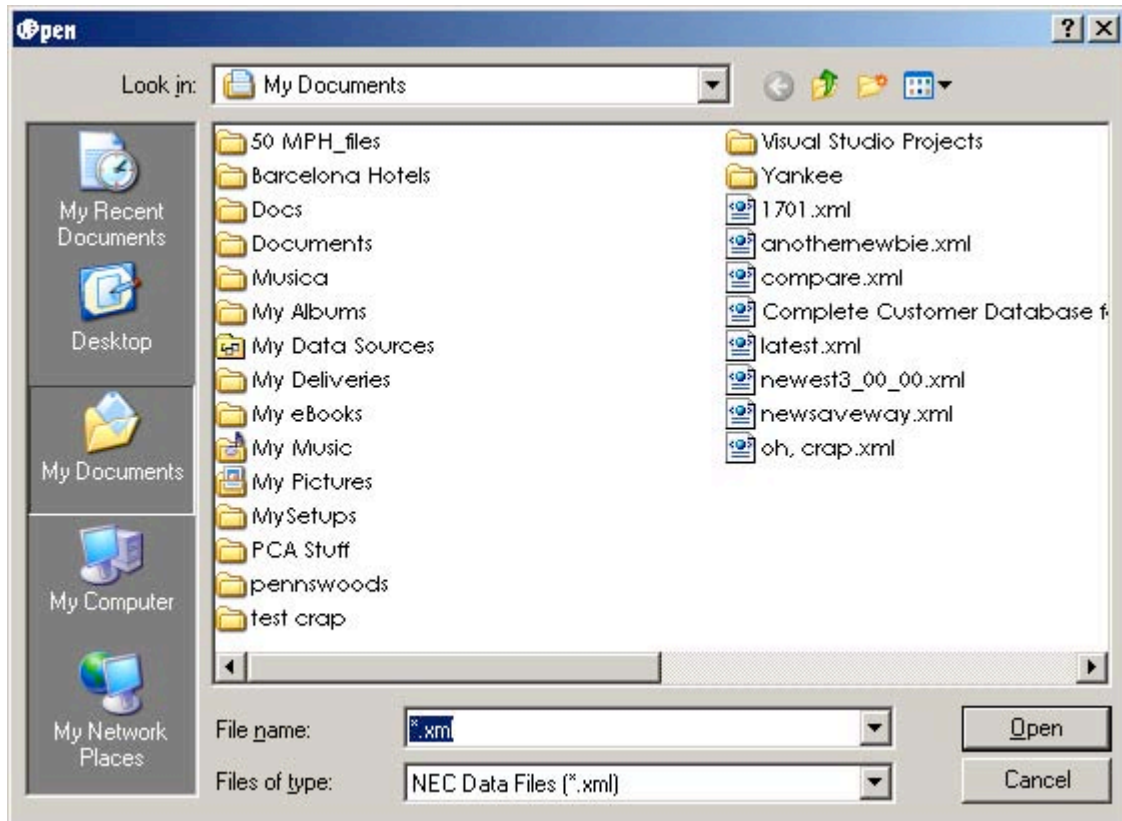


- iv. Clicking Yes will cause the data upload to commence.
 - v. Another dialog will appear after this one indicating to the user that the upload will take several minutes (although this is a multi-threaded program, the communication process is still a serial operation and can go only so fast).
- b. The File-Open function on upload
- i. This action will present the user with a dialog allowing him to wait until the end of the current upload of data, and once

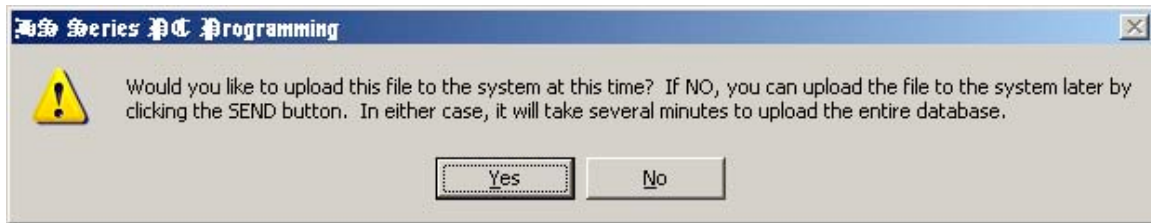
the upload is completed, allow the data file open dialog to be displayed automatically by clicking OK, or cancel the File Open request by clicking Cancel. (See figure below)



- ii. Once the file has complete it's upload, and the user had previously selected OK the File Open dialog shall be displayed. (See figure below)



- iii. Once the data file has been read in, the program will ask if the user wants to immediately upload the data or upload it later by clicking on the SEND button. (See figure below)



iv. Clicking "Yes" will cause the data upload to commence.

v. Another dialog will appear after this one indicating to the user that the upload will take several minutes (although this is a multi-threaded program, the communication process is still a serial operation and can go only so fast).

E. Using the Data Download option.

1. The data download option works in the same way that it has in the past, where it can only get data when neither the upload nor the download processes are running. Now, the data download option can be requested before the upload and download operations are finished processing, and like the file open/save operations, can be called automatically when the communications have finished, or called manually at a later time.

F. Clicking one option and then another terminates the previous request!

1. When clicking on the Data Download request and indicating OK to the message box to wait for the upload/download to finish, then clicking on the File Open request, will cancel the Data Download request! This software will only keep 1 pending request at any time. So, the last request made by the user is always the one acted upon.

G. How the Online utilities now work.

1. The Online Utilities will now override an upload or download process to run, and with the exception of any of the utilities which reset the system, the download or upload process will resume it's previous duties, once the utility operation is complete.

H. Navigation through the Trunks and Extensions can now get data faster.

1. Unlike with the single-threaded version of the System Administrator, this version does not download the port data for the

stations and trunks on request of the navigation buttons, unless the data has yet not been received. When the connection to the system is made, and the program from the system has received all of the primary data, the program begins to download all of the remaining station and trunk data by port (port data groups) in the background. The user may be working on other items, and when they get to the station or trunk programming, many of the ports could already be received from the system. If the user does try to navigate to a port, which is not yet retrieved from the system (using the First, Next, Previous, Goto, Copy or Swap buttons), the program will finish the current port it is downloading, and then immediately receive all of the programs (station and trunk if applicable) for the requested port. This process is very quick and the user should wait no more than 10 seconds or so, and while the user is waiting, a "Receiving..." message is displayed in the lower left corner of the screen on the status bar. If the ports are already received, the navigation to the desired location is now instantaneous!

