iExcelGen Manual

Programmer's Guide & Reference Manual

Copyright GOERING iSeries Solutions

Table of Contents

Part 1 Editorial/ Introduction 1

1.1 Editorial 1
1.2 Introduction 3
1.3 Release Notes 4

Part 2 Installation and Licensing 7

2.1 Overview 7
2.2 Internet Download 8
2.3 Preparations 9
2.4 Update Proceeding 10
2.5 BRAVO Reader Version 11
2.6 INSTALL AID Variation 12
2.7 Installation by FTP 13
2.8 Licensing 15
2.9 The E-Mail Feature 16
2.10 The Set-Up-Program 17

Part 3 Variations for calling 19

3.1 Overview 19
3.2 The Command IXLSGEN 20
The Command IXLSGEN 20
The Automation Options 21
3.3 The Command AGSPLF 22
Various Call options 22
3.4 The Product I4OUTQ 23
The Fully Automatic Calling 23
3.5 The API-Feature 24
What is it? 24
File description IXSPLFO 25

Part 4 Command Description 26

4.1 Overview 26
4.2 IXLSGEN 27
Restrictions 27
Error Messages 28
Troubleshooting 29
The Parameter of IXLSGEN 30
Overview 30
Standard Parameter 32

Copyright GOERING iSeries Solutions

Parameter for Special Input Files 35
Design Parameter 37
E-Mail-Specification 38
Additional Parameter 41
File description IXFMTP 45
4.3 IXLSGENSPL 49
The Parameter of IXLSGENSPL 49
Part 5 Conversion of Spool-Output Data 52
5.1 Overview 52
5.2 Spool File Conversion 53
Part 6 Examples Of Use 54
6.1 Overview 54
6.2 Formatting 55
Of Numeric Fields 55
Of Numeric Fields without Decimal Places 57
6.3 Conversion 58
Of a Query-Output 58
Of a Spool File 59
6.4 Functionality 60
Update - 60
Multisheet - 62
Part 7 The Product i4Client 63
7.1 The Product i4Client 63
Index 64

1 Editorial/ Introduction

1.1 Editorial

iExcelGen

Manual

Edition "03/2008"

This edition applies to the licensed program *iExcelGen* Version 08.03 and to all subsequent releases and modifications until otherwise indicated in new editions.

Make sure that you are using the latest edition for this product.

 Copyright GOERING iSeries Solutions

This document contains material that is protected by international copyright, trademark and other intellectual property laws. Unless otherwise specified, this document is intended for your licensed use only as covered by the Goering iSeries Solutions User License. You may not modify, copy, reproduce, republish, upload, post, transmit or distribute in any way any material, including code and software, from this document.

Editor:

GOERING iSeries Solutions
Alter Unteröwisheimer Weg 19
76646 Bruchsal
Germany

phone: +49 (0)7251-9895-12
fax: +49 (0)7251-9895-13
e-mail: info@goering.us
web: http://www.goering.us

© Copyright GOERING iSeries Solutions, 2008

We reserve the right to change this text.

1.2 Introduction

The command IXLSGEN converts externally defined AS/400 resp. iSeries database files into Microsoft Excel spreadsheets. iExcelGen places the created output file directly into any specified directory within the OS/400 Integrated File System (IFS)

AS/400 Query data can be converted as well. By accessing any predefined Query definitions, IXLSGEN executes an internal RUNQRY and converts the (temporary) output into the XLS format.

For users of SQL, it's also possible to execute SQL-SELECT-commands directly through IXLSGEN. The same is true with SELECT's stored in Sources Members.

On top of that, iExcelGen also converts data from spooled output files by mapping out individual areas of data. These mappings can be stored in their own separate file members to be used again for later conversions of spool files with identical layouts.

The conversion is performed with automatic formatting via the character style "Courier" to achieve a correct column adjustment.

The built-in e-mail function of IXLSGEN enables the user to submit all converted data to any e-mail address.

The integrated winzip-compatible Compressing-Feature saves valuable System Storage and is worth to use together with the E-Mail Feature. With the capability to have multiple files in one zip, it enables you also to send multiple files by one e-mail.

With the help of the free tool "i4Client", available at http://www.goering.us, it is easy to load and view the generated sheets on the PC immediately.

 Copyright GOERING iSeries Solutions

1.3 Release Notes

1. FMTOPT

Starting with Version 06.07 of iExcelGen our developers were forced to do a change at the layout related parm of iExcelGen.

There was a system limit for the number for the maximum number of parms which can be used in one command. This did not allow us to add the new capabilities we wanted, so we decided to remove a couple of older "historical parms". Refer to file IXFMTP

The following parms are removed from the command IXLSGEN:

Parameter	Field Description	Valid Entries
HEADLINE	Headline information	*DFT, *NONE, *FLDNAM, *COLHDG, *TEXT, *DATE, *TIME, *DATTIM
HEADLIN2	Headline information line 2	q.v. HEADLINE
HEADLIN3	Headline information line 3	q.v.. HEADLINE
FONT	Font	*AUTO
AUTOFMT	Automatic Formatting	*YES, *NO, *FRACONLY, *ALLFRAC
SHOWNUM0	Show Zero Values	*YES, *NO
DATFMT	Date Format	*DFT, *ISO, *USA, *EUR, *JIS, *YYMD, *XLS
TIMEFMT	Time Format	*DFT, *ISO, *USA, *EUR, *JIS

In the file IXFMTP the layout related parms are handled as follows:

Field Name	Field Description	Valid Entries
FMNAME	Format name	*DEFAULT, *SPOOL
FMHEAD	Headline	*DFT, *NONE, *FLDNAM, *COLHDG, *TEXT, *DATE, *TIME, *DATTIM
FMHED2	Headline 2	q.v. FMHEAD
FMHED3	Headline 3	q.v.. FMHEAD
FMFONT	Font name	*AUTO
FMAUFM	Automatic Formatting	*YES, *NO, *FRACONLY, *ALLFRAC
FMZERO	Show Zero Values	*YES, *NO
FMDFMT	Date Format	*DFT, *ISO, *USA, *EUR, *JIS, *YYMD, *XLS
FMTFMT	Time Format	*DFT, *ISO, *USA, *EUR, *JIS

 Copyright GOERING iSeries Solutions

2. Support for native BIFF8

From Version 07.06 on iExcelGen supports the direct generation of Excel 97-2003 files (BIFF8 format) without need for JAVA-classes. Performance intensive processing is no longer an issue!

With the Version 08.03 and above the native generator gets some important improvements and now also updates existing Excel files, which enables our customers to handle graphics and pivot-functional files and load data natively onto the System i.

3. Multi-Attachment (Parameter ATTKEY)

The multi attachment feature is a new functionality within the GOERING Productline to enhance the eMail functionality which was originally able to only send one attachment.

Starting from Version 07.02 of i4Spool and Version 07.03 of iExcelGen it is now supported to send multiple files together.

i.e. you now can send 2 x PDF files together with 3 x Excel Reports as well.

As always we made sure to provide this new function with an easy understandable interface.

The main thing is the parm ATTKEY. Here you provide a unique Key (i.e. Username) which describes the package

!! Remarks !!

- Take care of a unique Key (i.e. User name), otherwise it can happen that eMail from different users are sent out togehter !! The Key is provied in both modes (collect mode and send mode).
  The file is collected when the special value *MULTI is provided at the eMail Adress and a unique Key is provided at ATTKEY.
  This can be done for up to 9 files.

- Take care of unique filenames without one package (xxx.PDF and yyy.XLS) otherwise unwanted overwrite operations will happen!!
  The send mode is initiated as soon as the ATTKEY parm is non-Blank and of course the other eMail related parms are provided as usual.

2 Installation and Licensing

2.1 Overview

This Chapter describes how to:

- download *iExcelGen* and its latest release from the internet.
- install *iExcelGen* on your System.
- update *iExcelGen* on your System.
- license *iExcelGen* on your System.
- configure the e-mail feature of *iExcelGen* on your system

Please check out our forum at http://www.goering.de/forum/index.php.

Here you can submit your questions and / or can help other users of the GOERING community.

 Copyright GOERING iSeries Solutions

2.2 Internet Download

iExcelGen can be downloaded from the internet address: http://www.goering.de . The file contains a compressed AS/400- resp. iSeries-Backup-File with all necessary objects for running *iExcelGen*.

There are 3 ways to install *iExcelGen*:

a) Installation of the SAVF using the INSTALL AID from Bugbusters.
b) Installation of the SAVF using FTP.

We recommend option a) because this is very easy to use without having to pay for.

Information about the latest iExcelGen release you get at the following website: http://www.goering.us

2.3 Preparations

1. Extract the (.zip) Download-File

If you do not already have a utility to unzip archived files, we recommend the application Winzip, which can be downloaded from the internet :
http://www.winzip.com
After the extraction, you will have either (separate from the execution) the ASCII file IXLSGEN.BRV or (using the FTP variant) IXLSGEN.SAV.

2. Verify that the FTP-Service on your AS/400 i.e. iSeries is active or start it.

Use the AS/400-command: STRTCPSVR SERVER(*FTP) to start the service

3. Update

If you want to update your existing *iExcelGen* installation, please rename your current library IXLSGEN to IXLSGENOLD.

Use the AS/400-command:
RNMOBJ OBJ(IXLSGEN) OBJTYPE(*LIB) NEWOBJ(IXLSGENOLD)

The installation program recognizes this library and adopts all the settings from it.

4. Java Option

If you want to use the JAVA-Option (available since *iExcelGen* v4.08), please load the corresponding files from the following internet address (approx. 4MB):
http://www.goering.de/download/IXLSGEN.JAVA.ZIP

 Copyright GOERING iSeries Solutions

2.4 Update Proceeding

1. Preparations:

If you want to load the latest release, please rename an already existing library before the upload:

IXLSGEN to IXLSGENOLD

Please use the AS/400-command:

RNMOBJ OBJ(IXLSGEN) OBJTYPE(*LIB) NEWOBJ(IXLSGENOLD)

That way the settings will be restored to the new version.

2. Installation:

Please carry the installation out, according to the desired method, as described in the following pages.

3. Assumption of the settings

The set-up-program (CALL IXLSSETUP) realize, that there is already installed an older version and offer the assumption of the settings with the function key **F10**.

2.5 BRAVO Reader Version

We recommend the utility BRAVO Reader. The installation is very easy and the technical support by Symtrax is very professional for solving technical problems!

The tool BRAVO Reader can be downloaded from our website http://www.goering.de or directly from Symtrax http://www.eu.symtrax.com (free download!)

After installing the BRAVO Reader on your PC, you have to open the file IXLSGEN.BRV. Please fill out the dialog boxes as you normally would.

Please proceed to the chapter on Licensing.

Copyright GOERING iSeries Solutions

2.6 INSTALL AID Variation

To easily transfer *iExcelGen* to your System AS/400, we also recommend using the tool INSTALL AID from Bugbusters.

The tool can be downloaded from the internet address http://www.bugbusters.net (free download)

After the installation on your PC, you have to open the file IXLSGEN.SAV. Please fill out the dialog boxes with normal values.

Please proceed to the chapter Licensing.

2.7 Installation by FTP

1. Create the backup-file on your System

Use the name IXLSGEN and the AS/400-command:

CRTSAVF FILE (QGPL /IXLSGEN) AUT(*ALL)

Open a DOS Window on your PC and change into the subdirectory which contains the ASCII file IXLSGEN.SAV (see chapter Installation-Preparations) .

2. Sign on to your System AS/400 resp. iSeries.

*Note that the name "AS400" will be used for the name of your system AS/400 resp. iSeries and the color blue for all responding messages from the FTP.

```
FTP AS400
Connected with AS400
220-QTCP at AS400.FIRMA.DE
220 Connection will close if idle more than 5
minutes.
User (AS400: (none)): USER
331 Enter Password
Password PASSWORD
```

Note that neither the password will be shown nor will the cursor move during entry.

```
230 USER logged on.
```

3. Change into the binary mode

```
FTP> binary
200 Representation type is binary IMAGE.
```

4. Change the naming format

```
FTP> quote site namefmt 1
250 Now using naming format "1".
```

5. Change to the library QGPL of your System AS/400 resp. iSeries

```
FTP> cd_/qsys.lib/qgpl.lib
250 "QSYS.LIB/QGPL.LIB is current library.
```

 Copyright GOERING iSeries Solutions

6. Start the transfer from PC to the AS/400 resp. iSeries

```
FTP> put IXLSGEN.SAV IXLSGEN.SAVF (replace)
200 PORT subcommand request successful.
150 Sending file to member IXLSGEN.SAV in file
IXLSGEN.SAVF in library QGPL.
```

Note that the transfer time will take a few minutes.

```
250 File transfer completed successfully.
FTP 123456789 Bytes sent in 98.76 seconds 54.321
KB/Sec.
```

7. Terminate the FTP-Session on the System AS/400 resp. iSeries.

```
FTP> quit
221 QUIT subcommand received.
```

8. Close the DOS command entry window.

The transfer to your System AS/400 i.e. iSeries is complete.

9. Create the *iExcelGen*-Objects on the System AS/400 resp. iSeries

Using the AS/400-command: RSTLIB SAVLIB (IXLSGEN) DEV (*SAVF) SAVF (QGPL/IXLSGEN)

Please proceed to the chapter Licensing.

2.8 Licensing

1. Add the library to your Library Searchlist in your Session

Use the AS/400-command: ADDLIBLE IXLSGEN

Installation of *iExcelGen* is now complete and, after entering the license-key, ready for execution.

2. Call the licensing for *iExcelGen*

Use the command: CALL IXLSCODE

3. Note the system specifications of your AS/400.

The *iExcelGen* licensing display will indicate the

a) Serial-No.,
b) Model-No. and
c) Processor-No.

of your AS/400 i.e. iSeries. If you don't already have a license key, please send the system information in an e-mail to: info@goering.us. You will receive your *iExcelGen* license key within 24 hours via e-mail.
The quickest way to get your license code (to receive a license within 30 minutes!) is to input your system specifications on the Download web page at http://www.goering.us. If you fail to enter the system specifications when downloading, you can revisit the page, enter the system information and select the button "Code Only".

4. Enter the licensing/ Setup of *iExcelGen*

Use the command : CALL IXLSSETUP

At first the licensing will be started (q.v. 2. Call the licensing). Please enter the license key and press the Enter Key. Now the setup of the application is starting.

Please note that the program tolerates only three repeated attempts of false license keys entries per day. The deactivation of the program will be repealed until the following day.

 Copyright GOERING iSeries Solutions

2.9 The E-Mail Feature

A precursor for the e-mail feature is access to a SMTP Server within your TCP-IP Network. In case you are not sure if you have access, ask your network administrator.

Configuration procedure:

1. Test the **TCP/IP address** from the **server** mentioned above.

2. Verify if, in the TCP/IP definitions of your AS/400-System, a **Host-Table-Entry for this IP-Address exists**:

- via the command: CFGTCP
- option 10 - Work with TCP/IP Host-Table-Entry

The entry for the IP-Address

- exists: Please take note of the name of the host.
- is not available: Create a new entry with the host name. This is not necessary if you have entered a DNS-Server [CFGTCP / 12]

Note: It is possible to work with the IP-Address and not with a name. Please look below for more information on using the IP-Address....

3. Configuration of the DEFAULT settings in *iExcelGen* via the following commands:

- ADDLIBLE IXLSGEN
- CALL IXLSSETUP

4. Now make the following specifications in the set-up-program (IXLSSETUP).

2.10 The Set-Up-Program

eMail-Settings:

- Please enter the ascertained hostname for the "SMTP-Host". If you don't want to work with a name, please enter a "-" (minus) and then the IP-Address.
  Example: -192.168.129.88

- Enter a sender's e-mail address as the default in the field "eMail Sender". It is not necessary to make an entry, but if you do so, it ought to be an e-mail address which has an account on your SMTP-Server. Otherwise, most servers will deny the outgoing e-mail.

- Now you can send the Excel files that *iExcelGen* generated by e-mail. For sending of e-mails you can enter 3 e-mail addresses:
  a) your own e-mail address (sender)
  b) the destination address
  c) the CC-address (optional)

- The sender's address is important for the authentication (dependant on the SMTP-Host).
  If the address is not correct, the host will deny access!
  Please note any corresponding error messages caused by using *iExcelGen*.

- It is possible to enter a user e-mail address in the file I4MUSP, so it is not necessary to enter the address again for each send-transaction.

- Please maintain the file with UPDDTA I4MUSP or other well-known tools. Since *iExcelGen* is using this file, the parameter **EMAILFROM** has to be set to *USRDFT.

- Some e-mail systems demand an authentication via user and password (ESMTP). If your server has such a system, then you have to set ESMTP = "Y" and enter the "user" and the "password" information encoded (BASE64!)! Please contact us if you need a tool for converting that is free for *iExcelGen* customers.

 Copyright GOERING iSeries Solutions

```
iExcelGen - Configuration

Language....:  EN     DE, EN

Defaults

Dateformat:  *ISO     *ISO, *USA, *EUR, *JIS, *YYMD
Timeformat:  *ISO     *ISO, *USA, *EUR, *JIS
Headline..:  *COLHDG  *NONE, *FLDNAM, *COLHDG, *TEXT, *DATE, *TIME, *DATTIM
Headline 2:  *NONE    *NONE, *FLDNAM, *COLHDG, *TEXT, *DATE, *TIME, *DATTIM
Headline 3:  *NONE    *NONE, *FLDNAM, *COLHDG, *TEXT, *DATE, *TIME, *DATTIM

eMail Settings

SMTP-Host...:  auth.mail.onlinehome.de
eMail Sender:  *USRDFT
eMail CC to.:  *NONE
use ESMTP...:  Y
ESMTP User..:  Userbase64
ESMTP Passw.:  Passw_base64

F3=CANCEL   F12=BACK
```

3 Variations for calling

3.1 Overview

This Chapter describes:

- Using the command IXLSGEN
- The automated options of the command IXLSGEN
- Using the command AGSPLF
- Fully automated method of calling IXLSGEN using the OUTQmizer product "I4OUTQ"
- Using the API-Feature

Copyright GOERING iSeries Solutions

3.2 The Command IXLSGEN

3.2.1 The Command IXLSGEN

After entering the command IXLSGEN in the command line and pressing the **F4** key, the input mask for the parameters for *iExcelGen* is displayed:

As a pre-condition, the library IXLSGEN must be in your library-list.

```
                    Generate Excel-File on iSeries (IXLSGEN)

   Enter your selection and press Enter

   File . . .
```

3.2.2 The Automation Options

By using the command IXLSGEN and the desired parameters, the complete command can be defined as a task called in any AS/400 application.

By using this methodology, a normal user (a user without knowledge of the correct syntax) can produce and distribute Excel report.

Another alternative for automation is to use the complete command (or even several commands) in CL programs or with scheduled jobs. (time-scheduled Jobs, OS/400-command WRKJOBSCDE).

With these functions, it is possible to schedule, generate and distribute a pre-defined Excel list.

 Copyright GOERING iSeries Solutions

3.3 The Command AGSPLF

3.3.1 Various Call options

For the conversion of the spool files with *iExcelGen*, use the command AGSPLF.

This command is a modification of the AS/400 standard command WRKSPLF and has been integrated as a function in all of the iSeries Tools from Goering iSeries Solutions.

The call options can only be activated by installed iSeries-tools.

```
AGSPLF                  Select Spoolfiles for Processing
                                                                  RISCY
 Type options, press Enter

 1=Send        2=Change     3=Hold  4=Delete      5=Display        6=Release
 8=Attributes  9=Copy spooled file 10=Sndnetsplf 11=HTML   12=PDF 13=Excel

                           Device or                  Total   Cur
 Opt File       User       Queue     User Data  Sts  Pages   Page  Co
     I4TIMESRV  GOERING    QPRINT               RDY   18           1
     I4T8000R   GOERING    QPRINT               RDY   18           1
     I4T1000R   GOERING    QPRINT               RDY   22           1
     QPJOBLOG   GOERING    QEZJOBLOG I4T1000R   RDY    2           1
     I4TSVP     GOERING    QPRINT               RDY    3           1
     I4T1000R   GOERING    QPRINT               RDY   23           1
     QPJOBLOG   GOERING    QEZJOBLOG I4T1000R   RDY    2           1
     I4T1000R   GOERING    QPRINT               RDY   23           1
     QPJOBLOG   GOERING    QEZJOBLOG I4T1000R   RDY    4           1
     I4TIMEDIRM GOERING    QPRINT               RDY    3           1
     I4TIMEDIRM GOERING    QPRINT               RDY    3           1
     I4TIMEDIRM GOERING    QPRINT               RDY    3           1
     I4T1000R   GOERING    QPRINT               RDY    2           1
     QPJOBLOG   GOERING    QEZJOBLOG I4T1000R   RDY    2           1

                                                                  More ...
 F3=Exit   F5=Refresh   F11=View 2    F12=Cancel
```

By utilizing this option for the conversion of spool files, you will save yourself the need to manually search for or enter spool job parameters.

AGSPLF offers still more:

- It is possible to define one's "preset" options, like speed dialing.
- Also, you can enter defaults, which will be used to expedite future conversions.

A description of AGSPLF is available separately. Contact info@goering.us for more information!

3.4 The Product I4OUTQ

3.4.1 The Fully Automatic Calling

i4OUTQ (available as a separate product) allows for an intelligent control system by the automatic calling of any commands. It has obvious benefits used in combination with *iExcelGen*.

If you are interested, please call us for this product, or feel free to evaluate *i4OUTQ* for yourself.

i4OUTQ and all of our other products are available for a free 30 day evaluation at http://www.goering.us

Copyright GOERING iSeries Solutions

3.5 The API-Feature

3.5.1 What is it?

Remarks for the new iExcelGen API-Feature:

What is the API-Feature?

The API allows you to construct an excel sheet independend from any data source.

Free access to any cell is given by the input file IXSPLFO.

How does it work?

- Create a duplicate object from file IXSPLFO to QTEMP:

  CRTDUPOBJ OBJ(IXSPLFO) FROMLIB(IXLSGEN) OBJTYPE(*FILE) TOLIB(QTEMP)

- Fill data to the file, by RPG or any other way, sample:

  CPYF FROMFILE(IXLSGEN/APISAMPLE) TOFILE(QTEMP/IXSPLFO) MBROPT(*ADD)

- Call *iExcelGen*:

  IXLSGEN FILE(*API) TOXLSF(apisample.xls) I4CLIENT(*LOCAL)

3.5.2 File description IXSPLFO

For a better understanding take a look at the sample file APISAMPLE.

SOLINN	Line Number	1..99999
SOCLMN	Column Number	1..250
SOFTYP	Field Type	
	"A"	Alphanumeric
	"N"	Numeric
SOATTR	"-"	Value SONVAL will be negative
	"H"	Headline Formatting
	"T"	Title Formatting
	"L"	Left aligned
	"R"	Right aligned
SOFRAC	Number of fixed fractions	
SOTHOU	"Y"	Thousands point
SONVAL	Numeric value	
SOAVAL	Alphanumeric value	

 Copyright GOERING iSeries Solutions

4 Command Description

4.1 Overview

1. The restrictions in IXLSGEN
2. IXLSGEN - Error messages
3. Troubleshooting
4. The detailed command description of IXLSGEN
5. The detailed command description of IXLSGENSPL

4.2 IXLSGEN

4.2.1 Restrictions

IXLSGEN is subjected to the following restrictions which are partly caused by Microsoft Excel:

- The generated Excel format will be by default Excel 2.1 (BIFF2). These files can be opened in higher Excel versions (like Office XP) without problems.

- In addition, starting with Version 04.09 of *iExcelGen*, it is now possible to generate BIFF8 (Excel97 and newer). This requires activation of the additional JAVA-classes with at least Java 1.2 installed on the iSeries.

- String fields may not exceed a maximum length of 256 characters.

- In files with more than 250 fields, IXLSGEN converts only the first 250 fields. All following fields are omitted. Numerous complex field definitions may lower this limitation under 250 converted fields per file.

- Files with an record length exceeding 9,999 Bytes (10K) can not be converted.

- Only alphanumeric and numeric fields (packed or zoned) as well as time-stamps and date fields can be converted with IXLSGEN. Binary fields are be ignored.

<u>Annotation:</u>

If not explicitly remarked in this manual, values with quotation marks or with asterisks (wildcard) should not be entered in IXLSGEN parameters.

 Copyright GOERING iSeries Solutions

4.2.2 Error Messages

ESCAPE messages:

CPF9897 Abnormal program termination. XXX records were converted. XXX errors occurred.

STATUS messages:

During conversion, IXLSGEN informs the user after every 1000 processed records about its continuing performance.

4.2.3 Troubleshooting

If the IXLSGEN command terminates in an untimely fashion or if you receive different results than those you expect, try the following steps to identify the causes:

Check the messages in your job log:

- Execute the DSPJOBLOG command.
- Press **F10** to display detailed messages.
- Review the produced messages at run time of IXLSGEN
- Place the cursor on each message and press **F1**.
- Perform the necessary corrections suggested by the messages or follow the recommended heading.

Verify if the current release of *iExcelGen* is installed.

If that fails, capture the screen w/ the error message(s) and send them to support@goering.us .

Please make sure to have completed the suggestion steps above before contact Support as they will want to verify that these steps have been attempted before suggestion alternative solutions.

 Copyright GOERING iSeries Solutions

4.2.4 The Parameter of IXLSGEN

4.2.4.1 Overview

There are existing many different parameters for the command IXLSGEN. The parameters are structured in the following five subsections:

1. Standard Parameter

- File FILE
- Member Name MBR
- To Excel File TOXLSF
- Excel Version to generate FILEFMT

2. Parameter for Special Input Files

- Spooled file name SPOOLFILE
- Job name, user, number JOB
- Spooled file number SPLNBR
- SQL Statement SQL
- SQL Source File SQLSRC
- Query QUERY
- Record Selection RCDSLT

3. Design Parameter

- Format Options FMTOPT
- Update NULL default NULLDFT

4. E-Mail-Specification

- To eMail Adress	EMAILTO
- eMail Group	EGROUP
- Sender eMail Adress	EMAILFROM
- CC eMail Adress	EMAILCOPY
- eMail -Title	MAILTITLE
- eMail Body	MAILBODY
- Message	MESSAGE
- eMail - Notification	NOTIFY
- Delete File after sending	KILLFILE
- eMail Userexit:	EMAILEXIT
- Attachment Group	ATTKEY

5. Additional Parameter

- Overwrite existing file	OVRWRT
- Sheet Create/ Update	UPDSHEET
- Name of Sheet	SHEETNAME
- Transfer Table QUSRSYS	TFRTBL
- DBCS Data	DBCS
- Error when File is empty	EMPTYERR
- Create multiple Files	MULTIFILE
- Start i4Client:	I4CLIENT
- Move to ZIP-File	TOZIPF
- temp. CCSID for JAVA	JAVACCSID

 Copyright GOERING iSeries Solutions

4.2.4.2 Standard Parameter

FILE

File: Specifies the name of the external defined data base file whose data records are to be converted into Microsoft Excel format. Only physical and logical files with one format may be specified.

This parameter is mandatory.

Valid entries:

**SQL*	Specifies that a SQL SELECT command will be execute and whose (temporary) output file shall be converted afterwards to the XLS format. The entry of the SQL command is executed separately.
**SPOOL*	Specifies that a spool file will be used as an input file whose data records are to be converted. If no library name is specified, the default value **LIBL* or **CURLIB* will be used to find the previous specified file.
**QUERY*	Specifies the internal call of a query with RUNQRY that creates a temporary output file which will be converted into the XLS format subsequently.
**SQLSRC*	Specifies that a SQL SELECT command will be executed and whose (temporary) output file shall be converted afterwards to the XLS format. The command is discarded in a source member. The entry of the member will be carried out separately.
**CREATE*	Call up the creation of an Excel-file dependent on a preceded **COLLECT* process. This parameter is only valid for the Excel version **JAVA*
*API	With the API-Feature an Excel file can be created in a free and independent way. You just have to provide one record per desired cell with the physical file IXSPLFO. Find more details in the manual.
*QUERYA	This is an alternative call for the *QUERY

which is recommended to be used in case of Authority issues. The headings from the Query are not determined.

**LIBL* All libraries in the job's library list are searched until the first matching object is found.

**CURLIB* The current library for the job is searched. If no library is specified as the current library for the job, the library QGPL will be used.

MBR

member name: Specifies the database file member name that is to be converted.

Valid entries:

**FIRST* The first member (in the order of creation date) in the previous specified database file is to be converted.

TOXLSF

To Excel file: Specifies the complete name and access path of the output stream file (Excel format XLS) within the integrated file system IFS of the AS/400 i.e. iSeries. This file will receive the converted values.

This parameter is mandatory.

Valid entries:

**COLLECTNEW* Creation of a new collection.
After the completion of the collection and the generation of the Excel file *iExcelGen* will start with FILE(*CREATE).
This parameter is only valid for the Excel version "*JAVA"

**COLLECTADD* Addition from data
to an existent collection. After the completion of the collection and the generation of the Excel file *iExcelGen* will start with FILE(*CREATE).
This parameter is only valid for the Excel version "*JAVA"

 Copyright GOERING iSeries Solutions

Annotation:

- All subdirectories have to be specified.
- Non-existing subdirectories will not be created.
- Depending on the parameter OVRWRT, existing output stream files will be overwritten. Otherwise, the output file will be created automatically.

  Example: /home/goering/sample.xls for Excel resp. sample.dbf for DBASE.
- For detailed information about the format of file and path names see chapter 2 of the IBM manual , "Control Language - CL" / Reference-No. SC41-5722.

FILEFMT
File Version to generate

Specifies the desired file output format.

Valid entries:

**BIFF2*	Format is Excel 2.1 (BIFF2)
**BIFF8*	Format is Excel 97-2003 (BIFF8) native, without JAVA. This is only valid for Version 07.06 and above.
**JAVA*	Format is Excel 97 (BIFF8) with use of JAVA classes.
**CSV*	Outputs in a "comma separated" format. With help of the file IXFMTP one can control the use of separators and other specific parm.
**FXASC*	Format is fixed ASCII format
**DBASE*	Format is DBASE, excellent for import into Microsoft ACCESS and databases.

4.2.4.3 Parameter for Special Input Files

SPOOLFILE

Spooled file name: The name of the spooled file which is to be converted.

This parameter is mandatory.

JOB

Job name: The name or qualified name of the job that created the spooled file whose data records are to be converted.

User: The name of the user of the job that created the spooled file.

Number: The number of the job that created the spooled file.

Possible input values: 000000-999999

SPLNBR

Spooled file number: Specifies the number of the spooled file from the job whose data records are to be converted.

Valid entries:

**ONLY* Only one file has the specified name. Number is not needed.

**LAST* The file with the highest Number will be used.

SQL

SQL -Statement: Specifies a SQL command (Select), which is executed by *iExcelGen* and the results generated into an Excel file. The temporary output file of this SQL execution will be converted subsequently.

This parameter is mandatory.

SQLSRC

SQL -Source File: The name of a library which contains a SQL command.
Note: If there is no attribute for the library, the default value *LIBL will be used for finding the query-definitions.

QUERY

Query: Specifies the name of a query definition that will be applied for its

 Copyright GOERING iSeries Solutions

internal creation and subsequent execution. The temporary output file of this query execution will be subsequently converted.

Annotation: If no library name is specified, the default value *LIBL will be used to find the previous specified query definition.

Valid entries:

**LIBL* All libraries in the job's library list are searched until the first matching object is found.

**CURLIB* The current library for the job is searched. If no library is specified as the current library for the job, the library QGPL will be used.

RCDSLT
Record Selection:

Specifies if the Query-Selection screen shall be displayed.

Valid entries: **YES* or **NO*

4.2.4.4 Design Parameter

FMTOPT
Format Options

This parm (max.10 Characters) is the Key on the file IXFMTP
(PF : IXFMTP Lib.: IXLSGEN Member: IXFMTP)

Enter layout related parms in this file.

Valid entries:

**DEFAULT*
**FRACONLY*
[and your own...]

NULLDFT
Update NULL Default:

Specifies if NULL-content files should be replaced with "natural" default values..
iExcelGen is normally not able to handle NULL-Values because of Limits for a RPG-Program.
To overcome this limit there is an internal update of the file before it is processed with iExcelGen. As a sample for numeric values this is a "0" and for alphanumeric Value it is " "

Valid entries:

**AUTO*	iExcelGen determines if NULL-Values are recognized and replaced with Defaults. This is usually the case in case of SQL-Input.
**YES*	The input file is checked for NULL fields and an update is executed. Caution! This is updating the original file!
**NO*	The Input file is not checked for NULL-Values. This will probably cause a program error.

 Copyright GOERING iSeries Solutions

4.2.4.5 E-Mail-Specification

EMAILTO
To
eMail-Address: Specifies the complete e-mail address that the output file is to be sent to.

Valid entries:

**GROUP*	Mail is sent to a group of recipients. The name of the group must be provided with the parm EGROUP.
**MULTI*	The file should sent together with others. For this case provide a unique key for the Attachment Group with the parm ATTKEY. The send action is performed followed by another call to iExcelGen (or an other product of the GOERING product line) by referring to the Attachment Group.
**USRDFT*	The sender is determined with key "User Profile" from the file I4MUSP
**SPLUSRDFT*	The user is determined from the Spool file attributes.

EGROUP
eMail Group: Specifies the e-mail groupname. All e-mail addresses, which are attached to this group (in the file I4MUSP), will received an e-mail.

EMAILFROM
Sender
eMail Address: The name of the sender, if the converted file is to be sent to an addressee.

Valid entries:

**DFT*	Declaration as setup.
**USRDFT*	In this case, the name of the sender (from the file I4MUSP) will be ascertained with the key USRPRF.

EMAILCOPY
CC eMail-Address: The name of the CC addressee.

Valid entries:

**DFT*	Declaration as setup.
**SENDER*	The sender will received a copy.
**NONE*	No copy will be created.

MAILTITLE
eMail Title: Specifies the title of an e-mail.

Valid entries:

**FILE*	The name of the Excel file will be inserted.

MAILBODY
eMail-Body: Specifies the name of an e-mail body file.
This conforms a file member of the file I4MAILBODY, which can be edited with STRPDM and SEU.

Valid entries:

DEFAULT	The member DEFAULT from the source file I4MAILBODY is used.

MESSAGE
Message: The mailbody can include the two variables &MSG and &MS2. From the 160 specified characters in this parameter, 80 characters will be used to fill in these variables and appear in the body of the message.

NOTIFY
eMail-Notification: Specifies if a receipt of an e-mail will be asked for. As soon as the addressee opens the e-mail, the sender receives an confirmation. This depends on the settings at the addressee because an confirmation may not be desired.

Valid entries: **YES* or **NO*

 Copyright GOERING iSeries Solutions

KILLFILE
Delete File after sending: Specifies if the converted file (that was sent as an e-mail attachment) is to be deleted after its transmission.

Valid entries:

**ALLWAYS:* (Default value) The converted file will be deleted after its transmission. The deletion will be executed even if the transmission was interrupted by the intermediate occurrence of an error.

**IFSENDED:* The converted file will be deleted only after an error-free transmission is completed.

**NO:* The transmitted file will not be deleted after its transmission.

EMAILEXIT
eMail-Userexit: Specifies the name of an Exit program. This will called instead of the built-in SMTP-Client i4MAIL. There is an sample EMAILEXIT in the source file SAMPLES.

The default *NONE means the internal I4MAILSE is used.

ATTKEY
Attachment Group The name for an attachment group which is used to group multiple files together in one package.

4.2.4.6 Additional Parameter

OVRWRT
Overwrite existing file:

Specifies if an output file located in the same path with the same name and extension will be overwritten. The contents of the previous output file will be deleted .

This parameter is mandatory.

Valid entries:

**YES:* The receiving output file, which will be found with the same name under the declared IFS path, will be overwritten.
The content of the output file will be deleted before IXLSGEN initiates the conversion. The former content of the output file can not be recovered if IXLSGEN ends due to occurring errors during the conversion process.

**NO:* An existing output file will not be overwritten or replaced and the initiated conversion will be terminated by sending an error message.

**UPD* The file will be updated. This is only valid for output formats *BIFF8 and *JAVA. It is important to provide a sheet name with parm SHEETNAME.

UPDSHEET
Create/ Update Sheet :

Specifies if a new sheet shall be generated or an existing sheet shall be updated.

This parameter is mandatory.

Valid entries:

**CREATE:* New sheets will be generated. If there are existing sheets with the same name in the Excel file, an error message will occur.

**UPDATE:* Existing sheets will be updated. In case of output format *JAVA: If the appropriate sheets are not found in the Excel file, an error message will occur. In case of output format *BIFF8 this will be ignored.

 Copyright GOERING iSeries Solutions

**FLEX:* Like **CREATE*, but no error message will occur, sheet will still be generated, but with an index value added to the sheet name (i.e. Newsheet1). This only works together with output format *JAVA

SHEETNAME

Name: Name of the target Excel sheet.

Valid entries:

**FILE* The name of the input file will be used a the sheet name in Excel. The parm is only valid for output format *JAVA or *BIFF8.

TFRTBL

Transfer table QUSRSYS: Specifies a code table for the character conversion from EBCDIC into certain Windows ASCII-Code.

Note that the specified table must be located in the library QUSRSYS.

Valid entries:

**CHRID* Dependent on the current CHRID the transfer table is determined.

DBCS

DBCS Data: Specifies if Double-Byte-Data will be used.

This parameter is mandatory.

Valid entries:

**YES:* DBCS data will be used.

**NO:* DBCS data will not be used.

EMPTYERR

Error when FILE is empty: Specifies how *iExcelGen* should handle empty files.

Valid entries:

**NONE:* No error if file is empty.

**MSG:* Generate message to the Excel file.

**BREAK:* Send message back to caller. Job ends abnormally.

**NOACTION* No error.

MULTIFILE

Create multiple Files: Specifies if *iExcelGen* should automatically create multiple tabs if the limit of about 65.000 lines is reached.

Microsoft, as the designer of the Excel File format has limited the number of rows to 65536. iExcelGen must adhere this limit..

But: For input files with a very large number of records iExcelGen can create multiple Excel files (in case of *BIFF2) or multiple sheets (in case of *BIFF8 or *JAVA). So this limit can be worked around.

This parameter is mandatory.

Valid entries:

**NONE:* No support of multiple files/sheets. iExcelGen throws out an error if the input file has more than 65536 Records to convert.

**SIZE:* If the limit is reached a new file is created (*BIFF2) or a new sheet is opened (*JAVA and *BIFF8). A suffix is automatically added to the file/sheet name

I4CLIENT

Start i4Client: Controls the communication with the free Windows-Client i4Client
This can be used after the generation of the Excel table for starting a download in the temporary windows-directory and for opening the table with Excel.

It is planned to can call any PC in the network in future versions. This functionality can be provided on request.

This parameter is mandatory.

Valid entries:

**NONE:* *i4Client* will not be used.

 Copyright GOERING iSeries Solutions

**LOCAL:* A transfer on the local PC will be started.

**LOCALSUI* Special mode for infor's BRAIN AS

TOZIPF

Move to ZIP-File The Name of a ZIP-File to be created. The created excel-sheets will be automatically compressed into a winzip-compatible zip file, if entered.
This makes most sense in combination with the E-Mail Feature, because the Excel-format is good to be compressed. This only works properly from non-QDLS folders.

JAVACCSID

temp. CCSID for JAVA For a proper JAVA execution a certain CCSID must be provided rather than 65555 which is often standard. Exsamples: 37 for English, 273 for German.

Valid entries:

**JOB* Use the CCSID from the current Job.

4.2.5 File description IXFMTP

In this file all output related parms are combined together. The key is a 10chars long name which is referred when the command IXLSGEN is performed at the parm FMTOPT

The file is delivered with some non-Nonsense Combinations of parms and can be changed as you like.

```
                      Physische Teildatei anzeigen

 Datei  . . . . . :   IXFMTP              Bibliothek . . . :   IXLSGEN
 Teildatei  . . . :   IXFMTP              Satz . . . . . . :   1
 Steuerung  . . . :                       Spalte . . . . . :   1
 Suchen . . . . . :

*...+....1....+....2....+....3....+....4....+....5....+....6....+....7....+....8....+....9
 *DEFAULT  *DFT      *DFT      *DFT      Arial                        *YES      N*DFT
*DFT
 *SPOOL    *DFT      *DFT      *DFT      Courier                      *YES      N*DFT
*DFT
 *FRACONLY *DFT      *DFT      *DFT      Arial                        *FRACONLY N*DFT
*DFT
                           ****** DATENENDE ******



                                                                                  Ende
 F3=Verlassen  F12=Abbrechen   F19=Links   F20=Rechts   F24=Weitere Tasten
```

In the file IXFMTP (PF : IXFMTP Lib: IXLSGEN Member: IXFMTP) the following layout related Parms are maintained:

FMNAME
Format name Name (Key) which identifies a combination of parms.

FMHEAD
Headline Informations Specifies what kind of information there should appear in the heading

This parameter is mandatory.

Valid entries:

**NONE* No additional values or information will be sorted.

**FLDNAM* The field names of the data base file will be sorted in the first headline of the created

 Copyright GOERING iSeries Solutions

spreadsheet.

**COLHDG* The column heading names of the data base file (specified with **COLHDG* in the DDS of this file) will be sorted in the first headline of the created spreadsheet.

**TEXT* The field text of the data base file (specified with **TEXT* in the DDS of this file) will be sorted to the first headline the created spreadsheet.

**DATE* The first headline of the spreadsheet will show the creation date.

**TIME:* The first headline of the spreadsheet will show the actual time.

**DATTIM* The first headline of the spreadsheet will show the actual date and time.

**DFT* Declaration as setup.

FMHED2
Headline informations line 2:

Specifies what kind of information there should appear in the second heading.
The possible values are identical to the parm FMHEAD.

FMHED3
Headline informations line 3:

Specifies what kind of informations there should appear in the third heading.
The possible values are identical to the parm FMHEAD.

FMFONT

Specifies the font which is used to create the Excel.
Remark: Please take care to use fonts that are available at the User's PC and printers.

Valid entries:

**AUTO* The character fonts will be assigned automatically by iExcelGen (default value) dependend on the input file. "Courier New" for spool files, "Arial" for the rest.

FMAUFM
Automatic

Formatting: Controls the formatting of numeric values in the output file.

Valid entries:

**YES*	Numeric values with decimals places will be formatted with a decimal point followed by two decimals places. Numeric values without decimals places will be formatted with a decimal point after each pairs of 3 digits.
**NO*	Numeric values will be formatted automatically by Excel functions.
**FRACONLY*	Numeric values with decimals places will be formatted with a decimal point followed by two decimals places. Numeric values without decimals places will be formatted automatically by Excel functions.
**ALLFRAC*	No formatting and no limitation of the decimal places will be applied.

 Copyright GOERING iSeries Solutions

FMZERO
Show Zero Values:

Specifies, if NULL-values in Excel should be inhibited or not.

Valid entries:

Y NULL-Values will be displayed in Excel as "0".

N NULL-Values will not be assumed in the Excel-file, the corresponding cell will be displayed as "blank"

FMDFMT
Date Format:

Specifies the language-dependent date representation. If there is nothing denoted, a default value **DFT* will be used.
The specification of **DFT* or another valid code is mandatory.

This parameter is mandatory.

Valid entries:

**DFT*	This (default value) converts the date based on attributes specified in the data area IXLSGENDFT *DTAARA.
**ISO, *USA, *EUR, *JIS*	Storage in the local way.
**YYMD*	Display as JJJJ.MM.TT
**XLS*	Serial Excel-Date

FMTFMT
Time Format:

Specifies the language-dependent time representation. If there is nothing denoted, a default value **DFT* will be used.
The specification of **DFT* or another Code is mandatory.

This parameter is mandatory.

Valid entries:

**DFT*	This (default value) converts the time based on attributes specified in the data area IXLSGENDFT *DTAARA.
**ISO, *USA, *EUR, *JIS*	Storage in the local way.

4.3 IXLSGENSPL

4.3.1 The Parameter of IXLSGENSPL

In addition to mostly same the parms as with command IXLSGEN there are the following:

SPLDFN

Spool Definition: Specifies if an available spool definition shall be used or if the Definition Dialog is to be called.

Valid entries:

**NONE* No use for any Spool-Splitters. The spool file is completely converted to Excel. The result is similar to the DSPSPLF.

**DEFINE:* Call the definitions dialogs to define structure and fields of a spool file.

**EDIT:* Call the Editor to edit an existing definition

**USE:* Use a previously defined spool definition to create the Excel file output.

ADDON

Type of Spool Add-On: Specifies which available spool enhancements of *iExcelGen* shall be used.

Valid entries:

**IXLSSPL:* The "classic" *iExcelGen* Spool-Add On, perfect for the converting of homogeneous lists. Both single- and multilined.

**I4SPLITT:* The tool *i4Splitt* for the converting of highly complex lists and the analyses of inhomogeneous spools.

 Copyright GOERING iSeries Solutions

DFNFILE

Definition File: Specifies a definition file of the *"iExcelGen Spool Add-On*" incl. a member file, which was generated within the spool splitting dialog. The file name usually begins with "IXG".

This parameter is mandatory.

Valid entries:

**NONE* No definition file to provide.

**DEFINE* Define a new one.

**SELECT* Shows a list of existing definitions to select one from it.

SPLITTDEF

Splitting Definition Name: The name of the split-definition, i.e. the description of the input relating to the product *i4Splitt*.

Valid entries:

**SELECT* Shows a list of existing definitions to select one from it.

SPLITTOUT

Splitting Output Design: The name of the output-definition, i.e. the description of the output relating to the product *i4Splitt*.

Valid entries:

**DEFAULT* Use the default output definition.

**SELECT* Shows a list of existing definitions to select one from it.

SPLFLT

Spool filter: Specifies a term which selects a row resp. the beginning of a group of lines, which is to be excluded from the conversion.

Valid entries:

**NONE* No filter.

SPLFLTTO

Spool filter to: Specifies a term which selects the ending of a group of lines, which is to be excluded from the conversion.

Valid entries:

**NONE* No filter.

SPLFLTLIN

Number of Lines: Specifies how many rows shall be excluded, starting with the term SPLFLT.

Valid entries:

**ONLY:* Only the row, which was identified.

**PAGEND:* Until the end of the page.

 Copyright GOERING iSeries Solutions

5 Conversion of Spool-Output Data

5.1 Overview

- The general functionality and the use of Spool File Conversion
- *Spool Add-On*
- *i4Splitt*

5.2 Spool File Conversion

Even the Standard Edition of *iExcelGen* comes with the ability to convert spools to Excel. A special feature here is that *iExcelGen* formats the sheet with the text font "Courier". This font lets the spool appear the same way as on the AS/400.

For more extended purposes like column-wise conversions of data from reports when each column of report is to end up in a column in Excel, a separate Tool " *iExcelGen* Spool Add-On (IXLSSPL)" is available. It does a great job as long as homogeneous spools are being used..

If your approach is to convert inhomogeneous spools , we suggest an alternative tool called "*i4Splitt*". This comes with an Designer that runs on the PC and allows for very easy application of definitions from the most complicated of spool files.

If you are interested in either of these Add-On products, ask your GOERING-Representative or your local dealer. More information is available at http://www.goering.us .

 Copyright GOERING iSeries Solutions

6 Examples Of Use

6.1 Overview

This chapter describes some examples of how to use *iExcelGen* with:

- the Formatting of Numeric Fields
- the Compression of the Formatting of Numeric Fields without decimal places
- the Conversion of a Query-Output
- the Conversion of a Spool File
- the Update Functionality
- the Multisheet Functionality

6.2 Formatting

6.2.1 Of Numeric Fields

The following sample call of IXLSGEN converts the AS/400 Database File DEMOPF02 at library IXLSGEN to the XLS-File demonum.xls in the current directory of IFS.

Only the "column headings" are shown in the heading of the sheet.

After generation, the file is presented automatically by *i4Client*.

IXLSGEN FILE(IXLSGEN/DEMOPF02) TOXLSF(demonum.xls) FMOPT(*DEFAULT) I4CLIENT(*LOCAL)

The parm FMOPT is the key to the file IXFMTP. The relevant layout data is maintained there, as in this example:

```
MIT DATEN IN EINER DATEI ARBEITEN                Modus  . . . :   ÄNDERN
Format . . . . :   IXFMTP                        Datei  . . . :   IXFMTP

Format name:           *DEFAULT
Headline:              *DFT
Headline 2:            *DFT
Headline 3:            *DFT
Font name:             Arial
Automatic Formatting:  *YES
Show Zero Values:      N
Date Format:           *DFT
Time Format:           *DFT


F3=Verlassen            F5=Aktualisieren         F6=Format auswählen
F9=Einfügen             F10=Eingabe              F11=Ändern
```

Notice that all the numeric fields are formatted with for Thousands and furthermore there is a fixed 2 digit decimal. In the case of the "ZIP" field , this may not be the desired format.

	A	B	C	D
1	CUSTNR DEMO	CUSTNAME DEMO	AMOUNT DEMO	ZIP
2	A00001	ABC Company	1.234,66	47.115
3	A00002	B2B Activity	4.567,89	88.551
4	A00003	Customs & more	4.444,00	12.542

Picture 3.1. "demonum.xls"

 Copyright GOERING iSeries Solutions

See next sample, with an optional formatting of the "ZIP" field.

6.2.2 Of Numeric Fields without Decimal Places

The following sample call of IXLSGEN converts the AS/400 Database File DEMOPF02 at library IXLSGEN to the XLS-File demonum.xls in the current directory of IFS.

Only the "column headings" are shown in the heading of the sheet.
After generation, the file is presented automatically by *i4Client*.

IXLSGEN FILE(IXLSGEN/DEMOPF02) TOXLSF(demonumzipok.xls) FMOPT(*FRACONLY) I4CLIENT(*LOCAL)

The parm FMOPT is the key to the file IXFMTP. The relevant layout data is maintained there, as in this example:

```
MIT DATEN IN EINER DATEI ARBEITEN                Modus  . . . :   ÄNDERN
Format . . . . :   IXFMTP                        Datei  . . . :   IXFMTP

Format name:           *FRACONLY
Headline:              *DFT
Headline 2:            *DFT
Headline 3:            *DFT
Font name:             Arial
Automatic Formatting:  *FRACONLY
Show Zero Values:      N
Date Format:           *DFT
Time Format:           *DFT


F3=Verlassen            F5=Aktualisieren         F6=Format auswählen
F9=Einfügen             F10=Eingabe              F11=Ändern
```

Only numeric fields with decimals are formatted, so the field "ZIP" looks better now.

	A	B	C	D
1	CUSTNR DEMO	CUSTNAME DEMO	AMOUNT DEMO	ZIP
2	A00001	ABC Company	1.234,66	47115
3	A00002	B2B Activity	4.567,89	88551
4	A00003	Customs & more	4.444,00	12542

picture 3.2. "demonumzipok.xls"

Tip: Go on and try the parameter FMOPT using the samples.

 Copyright GOERING iSeries Solutions

6.3 Conversion

6.3.1 Of a Query-Output

The following sample call of IXLSGEN converts the Query DEMOQYPF02 in IXLSGEN to the XLS-File demoqry.xls in the current directory of IFS.
Notice that *iExcelGen* is even able to catch the column headings specified in the Query. Have a look in the Query definitions if you like.

IXLSGEN FILE(*QUERY) QUERY(IXLSGEN/DEMOQYPF02)
TOXLSF(demoqry.xls)
FMOPT(*FRACONLY) I4CLIENT(*LOCAL)

	A	B	C	D
1	ZIP Code	Customer#	Customer Name	Amount
2	12542	A00003	Customs & more	4.444,00
3	47115	A00001	ABC Company	1.234,66
4	88551	A00002	B2B Activity	4.567,89

Picture 3.3. "demoqry.xls"

6.3.2 Of a Spool File

Here we demonstrate how to process a spool file.

Execute the following command:

RUNQRY QRY(IXLSGEN/DEMOQYPF02)

This creates a spool file, which is converted to Excel with the following command:

IXLSGENSPL SPOOLFILE(QPQUPRFIL) SPLNBR(*LAST)
TOXLSF(spool.xls) I4CLIENT(*LOCAL)

See that each line of the spool is converted to one row in Excel with everything is in same column.
The picture looks quite similar as the spool file display on the iSeries itself because of the automatic formatting with the Courier Font. (see pic. 3.4.)

	A			
1	23.09.04 18:41:25		Overview by Zip	SEITE 1
2	ZIP Code	Customer#	Customer Name	Amount
3	12.542	A00003	Customs & more	4.444,00
4	47.115	A00001	ABC Company	1.234,66
5	88.551	A00002	B2B Activity	4.567,89

Picture 3.4. demospool.jpg

To demonstrate the difference when using the *"iExcelGen Spool Add-On*", a picture has been included:

	A	B	C	D
1	**Overview by Zip**			
2				
3	**ZIP Code**	**Customer#**	**Customer Name**	**Amount**
4	12.542	A00003	Customs & more	4.444,00
5	47.115	A00001	ABC Company	1.234,66
6	88.551	A00002	B2B Activity	4.567,89

Picture 3.5. demospooladdon.jpg

More on the *"iExcelGen Spool Add-On"* product can be found in a separate manual.

 Copyright GOERING iSeries Solutions

6.4 Functionality

6.4.1 Update -

The sample file which we want to update has two sheets: sheet1 and chart1

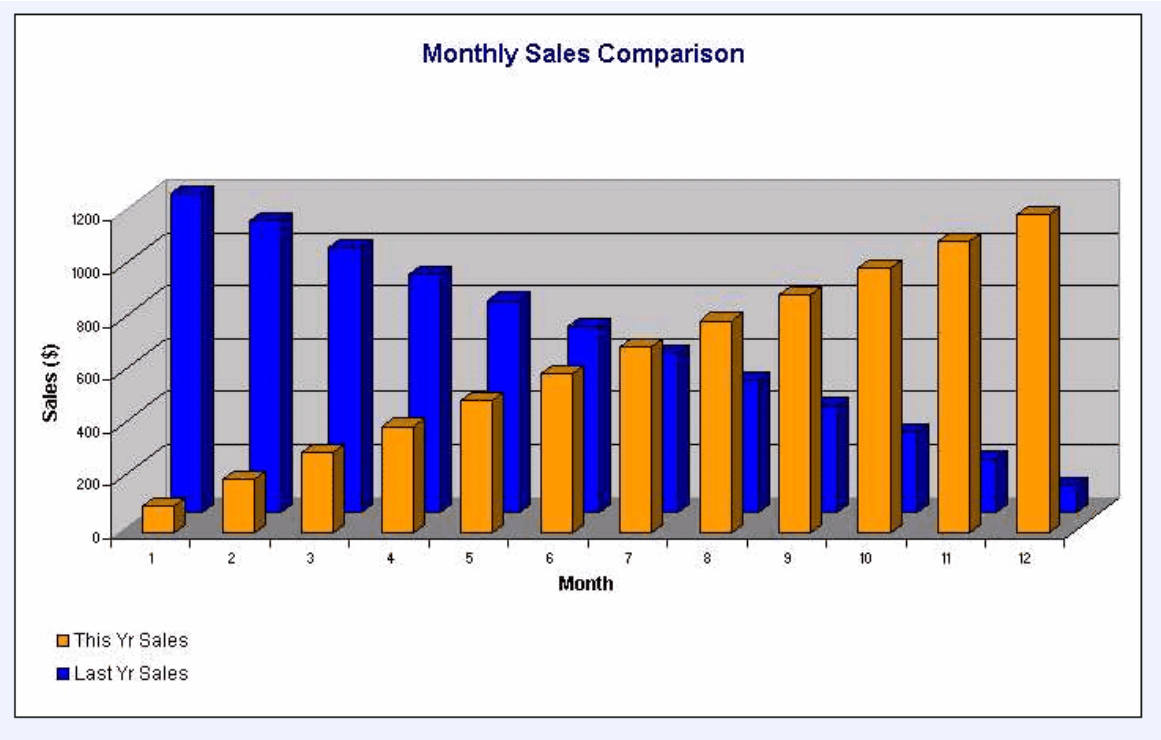
Picture 3.6. twosheets.jpg

Whereby *shee*t1 contains all the data, in this case a comparison of 12 months:

	A	B
1	this year	last year
2	100	1200
3	200	1100
4	300	1000
5	400	900
6	500	800
7	600	700
8	700	600
9	800	500
10	900	400
11	1000	300
12	1100	200
13	1200	100

Picture 3.7. data.jpg

The sheet *chart1* shows the data in a graphical way:



Picture 3.8. chart.jpg

With the following command, the file can be changed:

IXLSGEN FILE(DATA) TOXLSF('/home/goering/graph.xls') UPDSHEET(*UPDATE) SHEETNAME(SHEET1) FILEFMT(*JAVA)

6.4.2 Multisheet -

One of the best things in the newer versions of Excel starting with Excel 97-2003 (BIFF8) is the option to create multiple sheets within one file. This feature is also available to *iExcelGen*:

With the following sample, *iExcelGen* can be called using 3 different queries with the intent of having the results displayed in different sheets. They have the names Sally, Heavy and Charly:

First, create a new collection (*COLLECTNEW):

```
IXLSGEN  FILE(*QUERY) QUERY(IXLSGEN/QRYMULT01) +
         TOXLSF(*COLLECTNEW) SHEETNAME('Sally') +
         FILEFMT(*BIFF8)
```

Then, add the next tables to this collection (*COLLECTADD):

```
IXLSGEN  FILE(*QUERY) QUERY(IXLSGEN/QRYMULT02) +
         TOXLSF(*COLLECTADD) SHEETNAME('Heavy') +
         FILEFMT(*BIFF8)

IXLSGEN  FILE(*QUERY) QUERY(IXLSGEN/QRYMULT03) +
         TOXLSF(*COLLECTADD) SHEETNAME('Charly') +
         FILEFMT(*BIFF8)
```

To finish, start the Excel creation (*CREATE)

```
IXLSGEN  FILE(*CREATE) TOXLSF(multi.xls) +
         FILEFMT(*BIFF8)
```

You will find this sample also in the source file SAMPLES at library IXLSGEN, member BIFFMULTI (for *BIFF8) and JAVAMULTI (for *JAVA)

7 The Product i4Client

7.1 The Product i4Client

For Windows users, we offer a free add-on: i4Client. It is an easy-to-use client for direct communication with *iExcelGen*, as well as facilitates automatic file-transfer by FTP and instant viewing of the Excel file.

The client is free and available from Goering iSeries Solutions at http://www.goering.us

Details for configuring i4Client are in the manual, which is also available at our website http://www.goering.us

 Copyright GOERING iSeries Solutions

Index

- A -

ADDLIBLE 15
ADD-ON products 53
adopts all the settings 9
AGSPLF 20, 22
alphanumeric fields 27
API-Feature 24, 25
APISAMPLE 25
assumption of the settings 10
asterisks 27
automatic
- file-transfer 63
- formatting 3, 37, 59
automation options 21

- B -

backup-file 13
binary field 27
BRAVO Reader 8, 11
Bugbusters 12
built-in
- e-mail function 3
- SMTP Client 38
Button "Code Only" 15

- C -

CALL IXLSCODE 15
CALL IXLSSETUP 10, 16
CFGTCP 16
CL programs 21
column headings 55, 57, 58
column-wise conversion 53
command
ADDLIBLE 15
AGSPLF 20, 22
CALL IXLSCODE 15
CALL IXLSSETUP 10, 16
CFGTCP 16
CRTSAVF 13
DSPJOBLOG 29
IXLSGEN 20, 21, 26, 27, 28, 29, 30, 32, 35, 37, 38, 41
IXLSGENSPL 49
RNMOBJ 9, 10
RSTLIB 13
RUNQRY 59
STRTCPSVR 9
UPDDTA I4MUSP 17, 38
WRKSPLF 22
conversion
- of a database file 20
- of a query output 58
- of spool files 20, 22, 53, 59
- of spool output data 52
create multiple files 41
create multiple sheet 62
CRTSAVF 13

- D -

date field 27
deactivation 15
default settings 16
different sheets 62
direct communication 63
DOS command entry window 13
download file 9
downloading from the Internet 8

- E -

easy-to-use client 63
eMail
Sender 17
Settings 17
error messages 28
ESCAPE-messages 28

- F -

false license keys 15
field
- definition 27, 54, 55, 57
- length 27
alphanumeric - 27

field
binary - 27
date - 27
numeric - 27, 55, 57
packed - 27
string - 27
zoned - 27
file
- description IXSPLFO 25
backup- 13
download- 9
I4MUSP 17
IXLSGEN 13
IXLSGEN.BRV 9, 11
IXLSGEN.SAV 9, 12, 13
IXLSGEN.SAVF 13
IXSPLFO 24, 25
Zip- 9
formatting of
- numeric fields 55
- numeric fields without decimal places 57
free add-on 63
FTP
- service 9
- session 13
- techniques 8
fully automatic calling 23
functionality
multisheet - 62
update - 60

- H -

heading of the sheet 55, 57
homogenous spool 53
host
- name 16, 17
- table-entry 16

- I -

i4Client 3, 55, 57, 63
I4MUSP 17
i4Splitt 53
iExcelGen
- installation 9
- license 15
- program 1, 7, 8, 9, 12, 13, 15
- release 8
- Spool Add-On 59
inhomogenous spool 53
INSTALL AID 8, 12
installation 7, 10
- BRAVO Reader Version 11
- downloading from the Internet 8
- INSTALL AID 12
- manually operated by FTP 13
- options 8
- preparations 9
- program 9
- recommendation 8, 9, 11, 12
IP address 16
iSeries-Backup-File 8
IXLSGEN 30
- fully automatic calling 23
- library 9, 15
IXLSGEN.BRV 9, 11
IXLSGEN.SAV 9, 12, 13
IXLSGENOLD 9
IXLSGENQ.SAVF 13
IXLSGENSPL 59
IXLSSETUP 16
IXLSSPL - an iExcelGen Spool Add-On 53
IXSPLFO 24, 25

- J -

JAVA
- classes 27
- option 9
- version 1.2 27

- L -

library
- searchlist 15, 16
IXLSGEN 9, 10, 13, 15, 16, 55, 57
IXLSGENOLD 9, 10
QGPL 13
license 7
license keys 15
licensed program 1

- M -

main functions 3
maximum length 27
messages
error 28
ESCAPE 28
STATUS 28
Model-No. 15
multisheet functionality 62

- N -

numeric fields 27

- O -

OUTQmizer "i4OUTQ" 23

- P -

packed fields 27
parameter of IXLSGEN 30
AUTOFMT 37
DATFMT 37
DBCS 41
EGROUP 38
EMAILCOPY 38
EMAILEXIT 38
EMAILFROM 38
EMAILTO 38
EMPTYERR 41
FILE 32
FILEFMT 37
FONT 37
HEADLIN2 37
HEADLIN3 37
HEADLINE 37
I4CLIENT 41
JOB 35
KILLFILE 38
MAILBODY 38
MAILTITLE 38
MBR 32
MESSAGE 38
MULTIFILE 41
NOTIFY 38
NULLDFT 37
OVRWRT 41
QUERY 35
RCDSLT 35
SHEETNAME 41
SHOWNUM0 37
SPLNBR 35
SPOOLFILE 35
SQL 35
SQLSRC 35
TFRTBL 41
TIMFMT 37
TOXLSF 32
TOZIPF 41
UPDSHEET 41
parameter of IXLSGENSPL
ADDON 49
DFNFILE 49
SPLDFN 49
SPLFLT 49
SPLFLTLIN 49
SPLFLTTO 49
SPLITTDEF 49
SPLITTOUT 49
pre-defined Excel list 21
Processor-No. 15
program version 1
properties 24

- Q -

QGPL 13
query definitions 3, 58, 62
quotation marks 27

- R -

record length 27
release 7
restrictions 27
RNMOBJ 9, 10
RSTLIB 13
RUNQRY 59

- S -

zoned fields 27

screen
Generate Excel-File on iSeries (IXLSGEN) 20
iExcelGen - configuration 17
Select Spoolfiles for Processing 22
Serial-No. 15
set-up-program 10, 16, 17
SMTP-Host 17
Spool
- homogenous 53
- inhomogenous 53
Spool Add-On 53, 59
STATUS-messages 28
string fields 27
STRTCPSVR 9
system information 15

- T -

TCP/IP- address 16
time-scheduled Jobs 21
time-stamps 27
transfer from PC to the AS/400 13
troubleshooting 29

- U -

update
- functionality 60
- proceeding 10

- V -

variations for calling 19

- W -

wildcards 27
WinZip 9
WRKSPLF 22

- Z -

Zip file 9