LET THE CHEETAH OUT



With FourGen® CASE Tools







Do you have the following needs?

- Need GUI interfaces on my applications
- Need new features of IDS Cheetah (11.0)
- Need to use Informix 4GL
- Need to develop applications quickly
- Need a prototype application ASAP
- Need to maintain the code easily
- Need to quickly do code reviews
- Need to isolate business logic from display logic
- Need the ability to do dynamic array sizing

Can Informix 4gl fulfill these needs?







FourGen® CASE Tools provides:

- GUI interface to applications
- Generates Informix 4GL Source code
- Allows the development of code 10X faster than 4GL coding
- Allows for easy changes to code
- Quickly produces prototype code
- High level language makes for fast code reviews
- GUI logic is generated with screen generator
- Has dynamic arrays through the grid feature







FourGen® CASE Tools Benefits

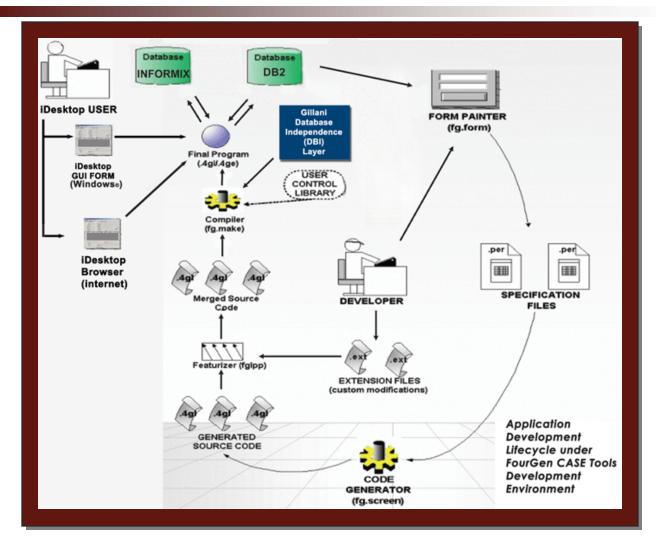
- Speeds up initial development
- Reduces ongoing cost of program/code maintenance
- Facilitates user to developer communication
- Structured Code
- Automatic Code Documentation
- Code Design Standards
- Standard User Interface
- Version Control System
- Generated code is Modifiable By Design[™] (MBD)
- Multi-language Code Generation







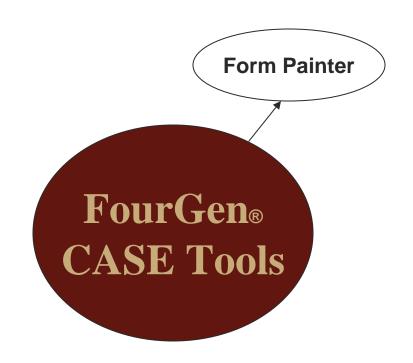
How FourGen® CASE Tools Work

















Form Painter

- Create new or update existing .per forms
- Creates 100% Informix 4GL compatible .per's
- Various types of forms supported header, header/detail, query, zooms etc.
- Easy to define zooms, lookups & validation functionality
- Link many forms easily & effectively
- Developer-friendly interface
- Detail Explosion Present additional detail data on same screen







Sample Generated .Per File

```
# Copyright (c) 2005 Gillani, Inc. All rights reserved. No part of
# this copyrighted work may be reproduced, modified, or distributed
# in any form or by any means without the prior written permission of
# Gillani. FourGen and Endura are registered trademarks of Gillani.
# Sccsid: @(#) .../oe.4gm/i_sales.cod/screen.per 1.24 Delta: 06/14/00
E Screen Generator version: 8.2 1001 3
DATABASE standard
SCREEN
                   ----- Sales Orders -----
                ] Customer:[A1
] Ship-To:[A4
 Office:[AO
Job/Proj:[A3
                                      IA2
-CLN-Q-Item----
CAI IBIAJ
CAI IBIAJ
                      TAKTAL
                                     TAM TAN
                                                        TAO
                                                              IAP]
CAI IBIAJ
                       TAKTAL
                                    TAM TAN
                                                        IAO
                                                              IAP]
CAI IBIAJ
                       TAKTAL
                                    TAM TAN
                                                        LAO
                                                              TAP1
CAI IBIAJ
                       TAKTAL
                              IAM IAN
                           ] Ext Price:[AR
Item Code:[AQ
    Desc:[AU
                                    J CAV
     Mfr:[AW ] Mfr Part No.:[AX
3
TABLES
   stoordre
   stoordrd
ATTRIBUTES
AO = stoordre.office_code, upshift, comments =
    " Enter the ordering office code.";
```







Generated .Per File - Continued

```
INSTRUCTIONS
screen record s_screen (stoordre.office_code, stoordre.cust_code,
    formonly.bus_name, stoordre.jp_code, stoordre.ship_to,
    formonly.ship_name, stoordre.order_type, stoordre.inv_add_code,
    formonly.inv_add_name, stoordre.promo_code, stoordre.contact,
    stoordre.order_source, stoordre.request_date, stoordre.po_no,
    stoordre.gross_margin_pct, stoordre.order_no,
    stoordre.order_status, stoordre.total_amount,
    stoordre.currency_code, formonly.net_amount, formonly.mfr_part_no,
    formonly.mfr_code, formonly.item_code, formonly.desc1,
    formonlu.desc2)
screen record s_dscreen[5] (stoordrd.cust_line_no.
    stoordrd.disp_item_qual, stoordrd.disp_item_code,
    stoordrd.disp_uom, stoordrd.disp_qty, stoordrd.line_type,
    stoordrd.disp_price, stoordrd.gross_margin_pct,
    formonly.multi_ship)
delimiters " "
defaults
    module
              = 0e
              = header/detail
    attributes = white
    location = 2, 3
    fgl_ver
              = dynamic
input 1
    table
               = stoordre
    keu
               = doc_no
    filter
              = (inactive_date is null or inactive_date >= today)
    math
               = item_amount = sum(net_amount)
               = total_amount = item_amount+frght_amount+tax_amount+misc_amount-order_disc_amount
    math
    math
               = gross_margin_pct = 1.00
               = name=off_lk, table=stxoffcr, key=office_code,
     filter=stxoffcr.sales_office = "Y" and stxoffcr.office_code = *office_code
```





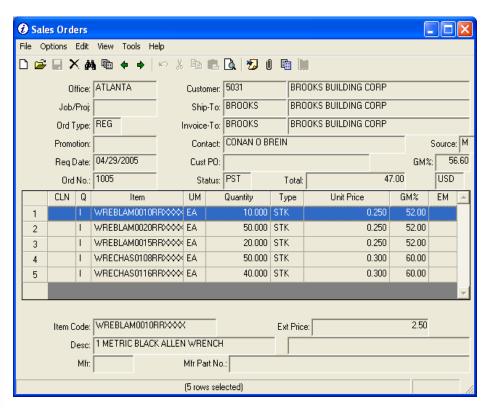


Character & GUI User Interface

Character

GUI

Office: ATLANTA Customer: 5031 BROOKS BUILDING CORP Job/Proj: Ship-To: BROOKS BROOKS BUILDING CORP Ord Type: REG Invoice-To: BROOKS BROOKS BUILDING CORP Promotion: Contact: CONAN O BREIN Source: M Req Date: 04/29/2005 Cust PO: GM%: 56,60 Ord No.: 1005 Status: PST Total: 47,00 USD -CLN-Q-Item	Scroll: [TAB], [DEL], or [ESC] to Quit ARROW KEYS to Scroll, [F3] or [F4] to Page
Item Code: WREBLAM0010RRXXXX Ext Price: 2.50 Desc: 1 METRIC BLACK ALLEN WRENCH	Office: ATLANTA
(1 of 5)■	Desc: 1 METRIC BLACK ALLEN WRENCH Mfr: Mfr Part No.:



Same .per file and 4gl code generates both presentations

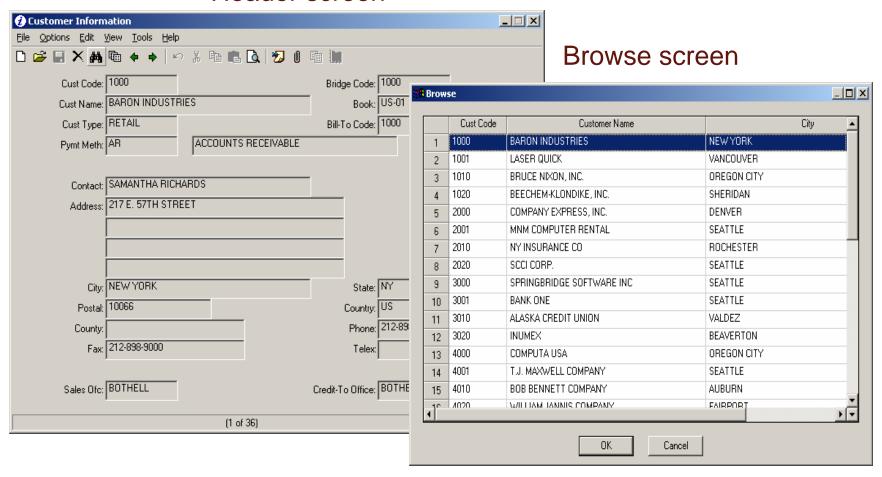






GUI Screen Generation Examples

Header screen



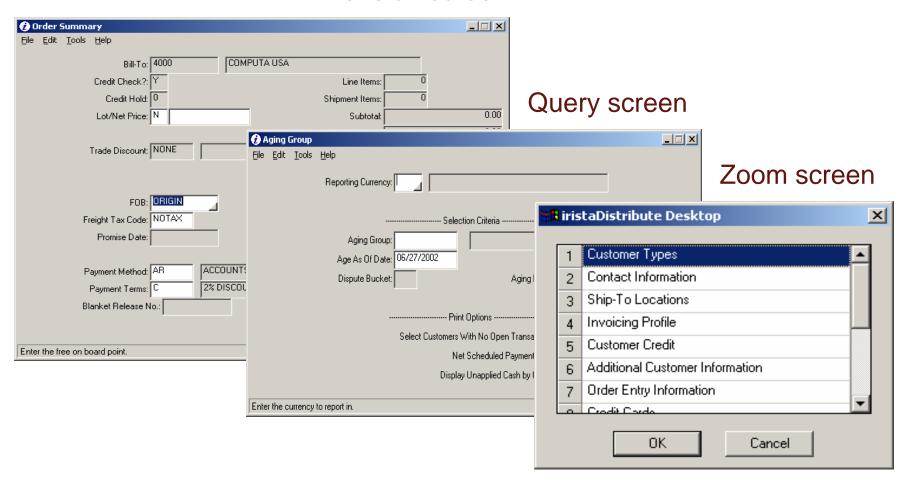






GUI Screen Generation Examples

Extension screen



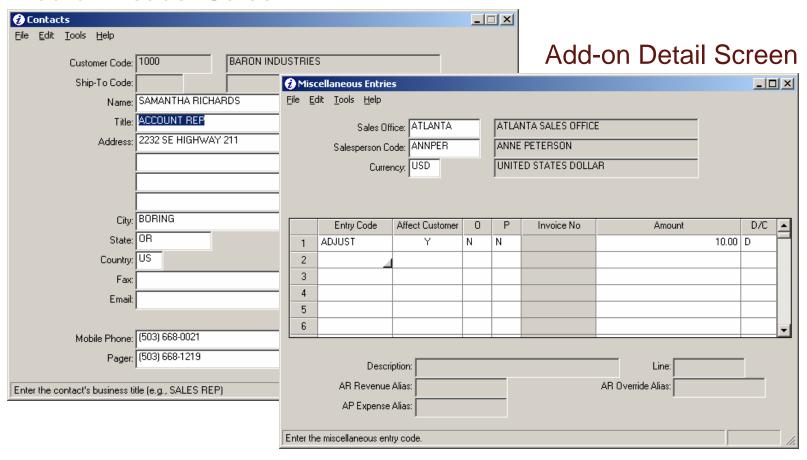






GUI Screen Generation Examples

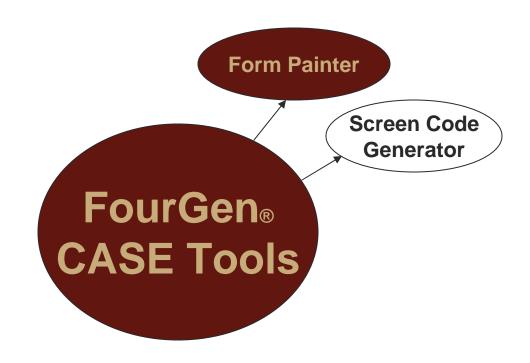
Add-on Header Screen

















Screen Code Generator

- Automatically generates structured, bugfree Informix 4gl Code
- Merge points in generated code allows developers to add custom code
- Structured code is self documenting
- Dynamic arrays for line items no more arr_max hassle
- Organizes code into separate .4GL's
 - globals.4gl, main.4gl, header.4gl, detail.4gl, midlevel.4gl







Generated Globals.4gl

```
# Copyright (c) 2005 Gillani, Inc. All rights reserved. No part of
# this copyrighted work may be reproduced, modified, or distributed
# in any form or by any means without the prior written permission of
# Gillani. FourGen and Endura are registered trademarks of Gillani.
# Sccsid: @(#) .../oe.4gm/i_sales.cod/globals.4gl 1.21 Delta: 07/27/00
#_guicalls - This line written by fg.guicalls
# Screen Generator version: 8.2 1001 (dynamic)
#_database - database for both compile and initial open
database standard
globals
   define
        #_define_1
        #_end
        # Library communication area
        # Global variables in this section are used to communicate
        # with upper level library (UPLL) functions and must be of the
        # same type as defined in the library globals.4gl files. Do
        # not change the data types of or remove or add any variables
        # to this section. And please don't remove these comments.
                    char(17), # Program identification
        progid
        scr_id
                    char(7),
                                 # Current screen id
       menu_item char(10), # Current screen 1d
menu_item char(10), # Current menu item running
scr_funct char(20), # Current function to be run
input_num smallint, # Current input section
p_cur smallint, # Used in the static model
s_cur smallint, # Used in the static model
scr_fld char(40), # Current field
nxt_fld char(40), # Programmatic next field
       prev_data char(80),
this_data char(80),
                               # Data before field entry
# Data after field entry
        hotkey
                    smallint
                                 # The hot key that was pressed
        # End library communication area
```

ënd globals







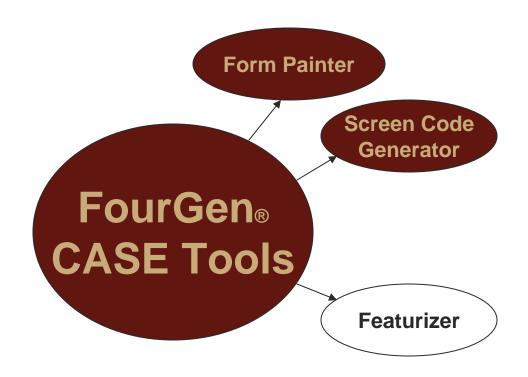
Generated Main.4gl

```
# Copyright (c) 2005 Gillani, Inc.  All rights reserved.  No part of
# this copyrighted work may be reproduced, modified, or distributed
# in any form or by any means without the prior written permission of
# Gillani. FourGen and Endura are registered trademarks of Gillani.
# Sccsid: @(#)
              .../oe.4gm/i_sales.cod/main.4gl 1.146 Delta: 10/04/00
#_guicalls – This line written by fg.guicalls
# Screen Generator version: 8.2 1001 (dynamic)
globals "globals.4gl"
#_local_static - Local (static) variable definitions
#_define_var - define local variables
   #_err - trap fatal errors
   whenever error call error_handler
   #_set_up - basic set up
   clear screen
   defer interrupt
   #_set_progid - set program identification
   let progid = "oe.i_sales"
   #_gui_begin_program - notify front end we are running in gui mode
   if is_gui() then call SplSendMsg("BeginProgram") end if
   #_start_error_log - start error logging file
call logStart("", "")
   #_init - initialize
   call put_scrlib("language", "ENG")
call put_scrlib("version", "8.2 1001")
call put_scrlib("dbname", "standard")
call put_scrlib("y_pos", "2")
call put_scrlib("x_pos", "3")
```















Featurizer

- Merges generated code & custom code
- Generated code remains untouched
- FourGen® Featurizer reads instructions in extension files to modify source code
 - With Block commands you place code based on the inserted block tags
 - Add new business logic or customize flow logic without modifying original source code
 - Change in a screen or schema just regenerate code to reapply your changes







Example Extension File

```
# Copyright (c) 2003 Gillani. Inc. All rights reserved. No part of
# this copyrighted work may be reproduced, modified, or distributed
# in any form or by any means without the prior written permission of
# Gillani. FourGen and Endura are registered trademarks of Gillani.
       @(#) .../oe.4gm/i_sales.cod/frame.ext 1.55 Delta: 06/02/00
start file "globals.4gl"
define
  no_ether_r smallint
start file "main.4gl"
after block main_a_tran after_tran
   # delete_stocmitd_rows
   # After we have written all the stoshipd rows and committed
   # the transaction, it is safe to remove all the stocmitd rows.
   # We can only do that after the transaction is committed,
   # otherwise if we run on Oracle, there will be a lap of time
   # between the moment we delete the stocmitd rows and the
  # moment we write the stoshipg rows.
  call D_cmit()
   #_free_grids
  # Free all shipment grids from memory
  call D collect()
before block main on_exit
   #_free_fg_gridh_grids
  call oe gridh free()
```







Globals.4gl File After Merging

```
# Copyright (c) 2005 Gillani, Inc. All rights reserved. No part of
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# in any form or by any means without the prior written permission of
# Gillani. FourGen and Endura are registered trademarks of Gillani.
# Sccsid: @(#) .../oe.4gm/i_sales.cod/globals.4gl 1.21 Delta: 07/27/00
#_guicalls - This line written by fg.guicalls
# Screen Generator version: 8.2 1001 (dynamic)
#_database - database for both compile and initial open
database standard
globals
   define
       #_define_1
       # FGLPP BEGIN 1 frame.ext (.cod) 20
       no_ether_r smallint,
       # FGLPP END 1 input 1 define
       # Library communication area
       # Global variables in this section are used to communicate
       # with upper level library (UPLL) functions and must be of the
       # same type as defined in the library globals.4gl files. Do
       # not change the data types of or remove or add any variables
       # to this section. And please don't remove these comments.
                   char(17),
       progid
                              # Program identification
                   char(7).
       ser id
                              # Current screen id
                   char(10). # Current menu item running
       menu_item
                   char(20),
                             # Current function to be run
       scr_funct
                smallint,
                             # Current input section
       input_num
                   smallint.
                             # Used in the static model
       p_cur
       s_cur smallint, # Used in the static mode
scr_fld char(40), # Current field
nxt_fld char(40), # Programmatic next field
prev_data char(80), # Data before field entry
this_data char(80), # Data after field entry
                             # Used in the static model
                             # Programmatic next field
                             # Data before field entry
```







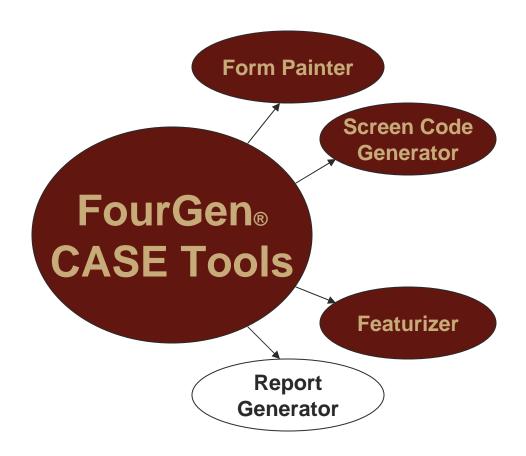
Main.4gl after Merge

```
function main_a_tran()
# This function is called after a transaction has been completed.
# That is. disk writes are done and work has been committed (or the
# transaction is cancelled).
   #_define_var - define local variables
   define
       #_local_var - local variables
       tran cancelled smallint
   #_get_tran_stat - determine if the transaction was cancelled
   call switchbox("get status")
   let tran_cancelled = fgStack_pop()
   #_after_tran - after transaction logic goes here
   # FGLPP BEGIN 1 frame.ext (.cod) 27
   # delete stocmitd rows
   # After we have written all the stoshipd rows and committed
   # the transaction, it is safe to remove all the stocmitd rows.
   # We can only do that after the transaction is committed,
   # otherwise if we run on Oracle, there will be a lap of time
   # between the moment we delete the stocmitd rows and the
   # moment we write the stoshipg rows.
   call D_cmit()
   # FGLPP BEGIN 28 reel.ext (.cod) 19
   #_commit_stoccmtd_rows
   if get_scrlib("curs_count") > 0
       call HC_ccmtd(llh_field_value("q", "doc_no"))
   end if
   # FGLPP END 28 after block main_a_tran delete_stocmitd_rows
   #_free_grids
   # Free all shipment grids from memory
   call D_collect()
   # FGLPP END 1 after block main_a_tran after_tran
```















Report Generator

- Create Informix 4GL reports programs using report image file
- Organizes code into separate .4GL's
 - globals.4gl, main.4gl, report.4gl, midlevel.4gl, lowlevel.4gl
- Includes the following sections
 - Layout, Attributes, Select, Language, Schedule, Concurrency
- Multiple report formats
 - MS Word, MS Excel, PDF and Browser







Sample of a Report lowlevel.4gl File

```
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# in any form or by any means without the prior written permission of
# Gillani. FourGen and Endura are registered trademarks of Gillani.
# Sccsid: @(#) .../oe.4gm/o_order.cod/lowlevel.4gl 1.23 Delta: 09/10/00
# Report Generator version: 8.2 1001
globals "globals.4gl"
#_local_static - Local (static) variable definition
function before_group(group_key)
#_define_var - Define local variables
   define
      #_local_var - Local variables
      group_key char(20)
                         # group identification
   #_err - Trap fatal errors
  whenever error call error handler
   #_first_row - Check for first row
   if group_key = "first_row"
   then
      #_call_first_row - Call function for processing
      call b_g_first_row()
   end if
end function
# before_group()
```







Sample Extension File for a Report

```
# Copyright (c) 2003 Gillani, Inc. All rights reserved. No part of
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# in any form or by any means without the prior written permission of
# Gillani. FourGen and Endura are registered trademarks of Gillani.
# Sccsid: @(#) .../oe.4gm/o_order.cod/lowlevel.ext 1.8 Delta: 07/07/00
start file "lowlevel.4gl"
static define
 transmit smallint.
 trx_success smallint.
 transmit_method like stxtrmtr.transmit_method,
 transmit_flag like stxtrmtr.transmit_flag,
 error_mssg char(80).
 sel_stmt char(2048).
 g_ack_printed like stoordre.ack_printed;
```







Lowlevel.4gl After Merge

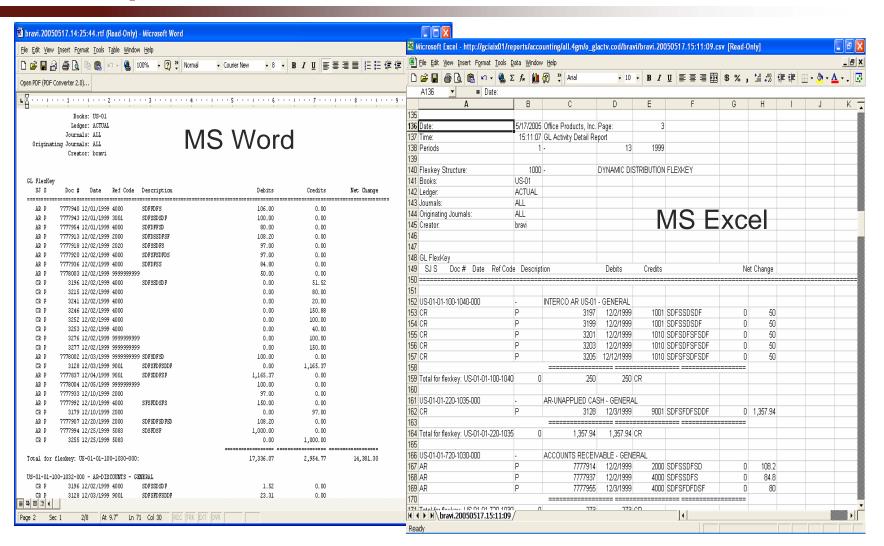
```
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# in any form or by any means without the prior written permission of
# Gillani. FourGen and Endura are registered trademarks of Gillani.
# Sccsid: @(#) .../oe.4gm/o_order.cod/lowlevel.4gl 1.23 Delta: 09/10/00
# Report Generator version: 8.2 1001
globals "globals.4gl"
#_local_static - Local (static) variable definition
define
   # FGLPP BEGIN 1 lowlevel.ext (.cod) 13
   transmit smallint,
   trx success smallint.
   transmit_method like stxtrmtr.transmit_method,
   transmit_flag like stxtrmtr.transmit_flag,
   error_mssg char(80),
   sel_stmt char(2048),
   g_ack_printed like stoordre.ack_printed
   # FGLPP END 1 static_define
function before_group(group_key)
#_define_var - Define local variables
      #_local_var - Local variables
      group_key char(20)
                           # group identification
   #_err - Trap fatal errors
   whenever error call error handler
```







Report in MS Word and MS Excel Formats

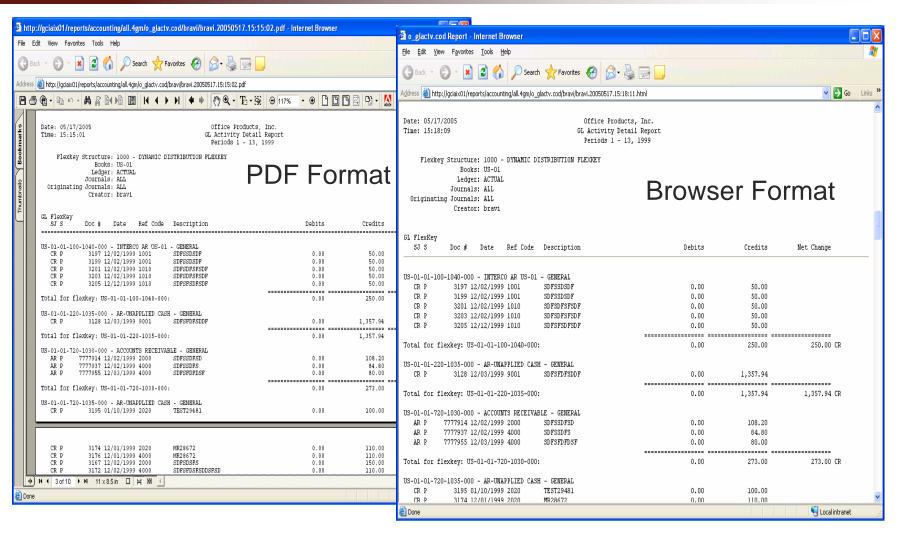








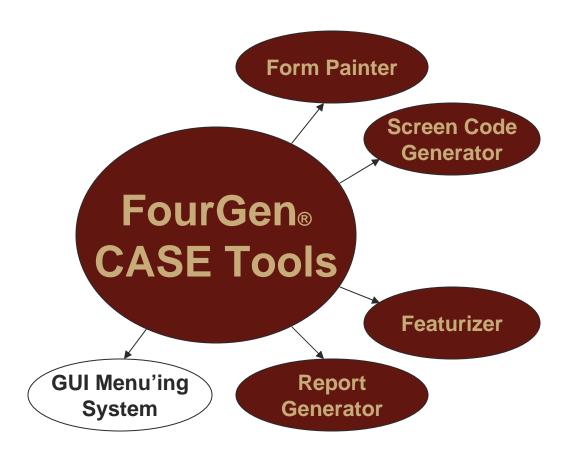
Report in PDF and Browser Formats

















FourGen® Menus

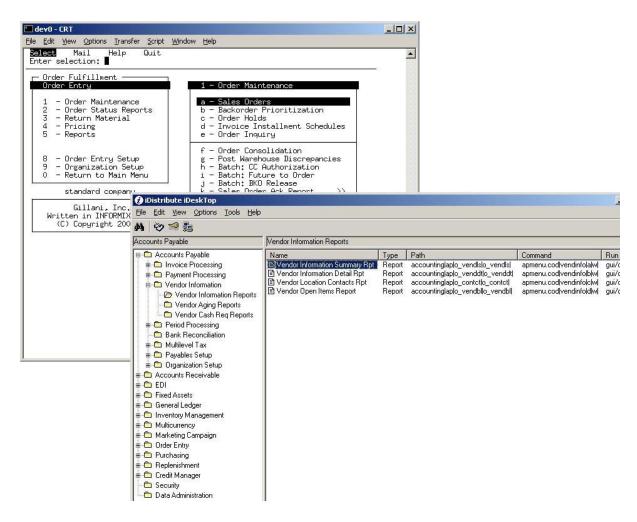
- Menu options can be single or multiple characters with description
- Flexible menu option format
- Each menu & submenu has its own directory
- Menu option can use hotkey option
- Predefined structure can be utilized
- Windows Explorer-like Menu interface available via iDesktop for GUI
- Multi-Language Menu support







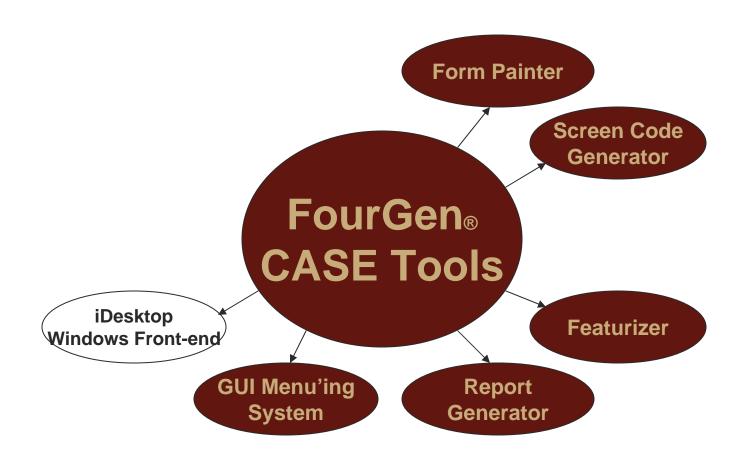
GUI and Character Menuing

















iDesktop - Features

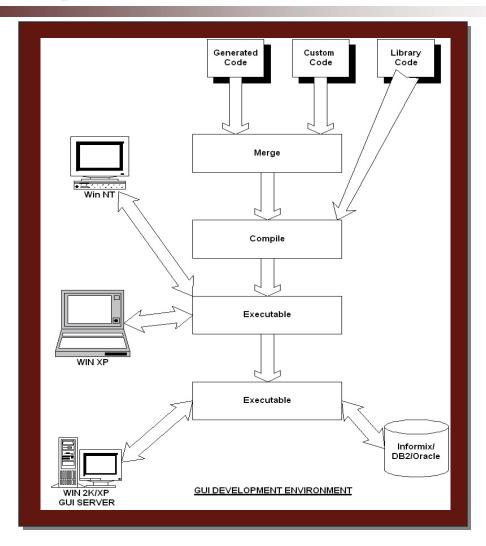
- Windows based GUI generator
 - Reads database for screens that make up a program
 - Generates VB Forms from Informix Forms
 - Creates GUI Executables from VB Forms
- SSH communication for added security
- GUI menu program presents menus in WIN Explorer-like format







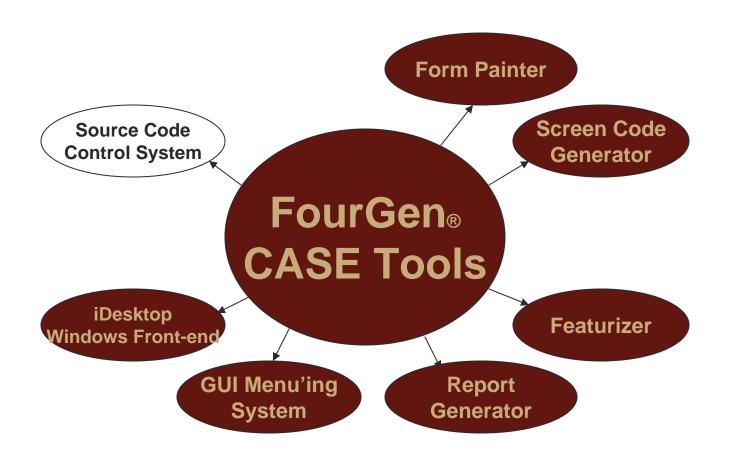
iDesktop Code Generation Path

















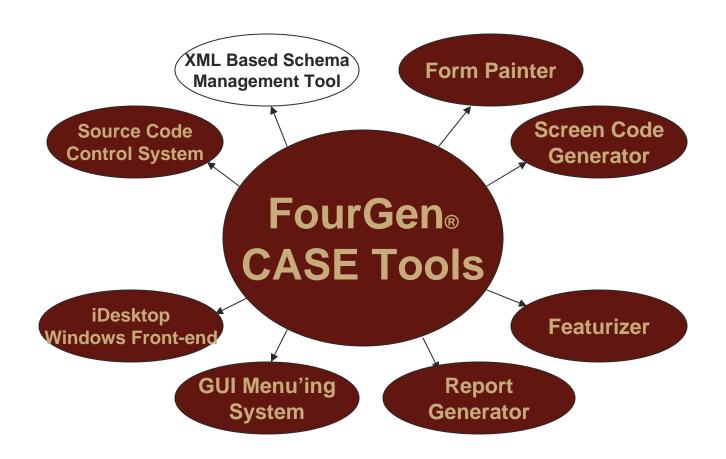
FourGen® SCCS

- Builds on top of SCCS utilities in UNIX
- Advantages
 - Extremely robust
 - Easy to use
 - Tight control of code
 - Included in FourGen® CASE Tools















FourGen_® DBmerge

- Schema Management Tools
 - Allows you to control schema
 - Provides audit trail of schema changes when used with FourGen® SCCS
 - All schema information & standard data stored in XML format















Additional Features in FourGen® CASE Tools

- User Defined Notes on Screens Multiple note types and notes for each line of detail.
- Add-on hdr/dtl, add-on view hdr/dtl, extension hdr/dtl etc. are a few of new Form Types
- Grids replace temporary tables index them, random access them, unload them - even in .csv formats
- Primary Keys instead of Row ID's
- Function Metrics Trace your program control within functions
- Defer or force referential constraints using Library Functions
- Encryption Functions available handy for securing your data
- Document attachment feature available with GUI Front-End
- Archive & Purge Set your own selection and rejection rules and save them as catalogs for successive runs or run these programs as batch jobs







We Use FourGen® CASE Tools

iDistribute and Gillani Financials

■ <u>iDistribute</u> - A complete end-to-end Supply Chain and Distribution Management solution.

The system provides advanced Order Management capabilities, integrated with a comprehensive Warehouse and Branch Inventory Management, Purchasing, and Replenishment.

■ Gillani Financials – Comprehensive Accounting System providing General Ledger, Accounts Payable, Accounts Receivable, Fixed Assets, Budget Management, Credit Management, and Financial Reporting functionality.

WRITTEN USING FOURGEN® CASE TOOLS!

CORNERSTONE OF "MODIFIABILITY BY DESIGN™" CONCEPT!







Use FourGen® CASE Tools

















THANK YOU FOR COMING

Gillani Products

- FourGen® CASE Tools
- iDistribute
- Gillani Financials

Gillani Contacts

- Sales sales@gillani.com
- Phone (972)-918-0400
- URL www.gillani.com
- Visit us in the Exhibit Hall





