

CODEPAINTER

C L I E N T / S E R V E R

revolution



The most complete CASE TOOL For Developing Business/Commercial Applications

CODEPAINTER runs on

- Windows 2000
- Windows NT
- Windows 98
- Windows 95

CODEPAINTER makes your applications compatible with

- MS SQL Server 7.0
- Oracle 8
- IBM DB2
- Under Construction: Informix

CODEPAINTER generates source code in:

- Visual Fox Pro
- Visual Basic
- Under Construction: Java

ZUCCHETTITOOLS
SOFTWARE TECHNOLOGY

CODEPAINTER frequently asked questions

Who is CodePainter for?

Software Houses developing Business/Commercial SW Applications.

What kind of applications can be build?

All kind of Business/Commercial applications: General Ledger, Inventory Control, Sales & Purchase Management, Production Management, etc.

Is programming knowledge required?

Very little knowledge is required: the applications are 'painted' using advanced graphical tools.

How can I generate the application without programming knowledge?

CodePainter automatically generates the entire source code in the defined programming language.

Do I need other tools to support my applications life cycle?

CodePainter supports all Software life cycle stages, starting from Analysis to Maintenance. Of course you need the license for the compiler of the generated source code to sell your application executable code.

What makes CodePainter different from other tools?

CodePainter is a powerful and user-friendly tool that includes both, RAD and C.A.S.E. functionalities: development is speeded up and the software plan is organized and managed properly.

How much time can be saved using CodePainter?

With both, RAD and CASE functionalities, software development can be made up to 10 times faster compared to standard programming languages.

In which languages is CodePainter available?

CodePainter default language is English and you can easily translate the generated application using the translation tool (included).

Are royalties owed for distribution?

No royalties are owed. You have 100% ownership on your applications!

Can Client/ Server applications be developed?

Yes, and CodePainter supports you on that

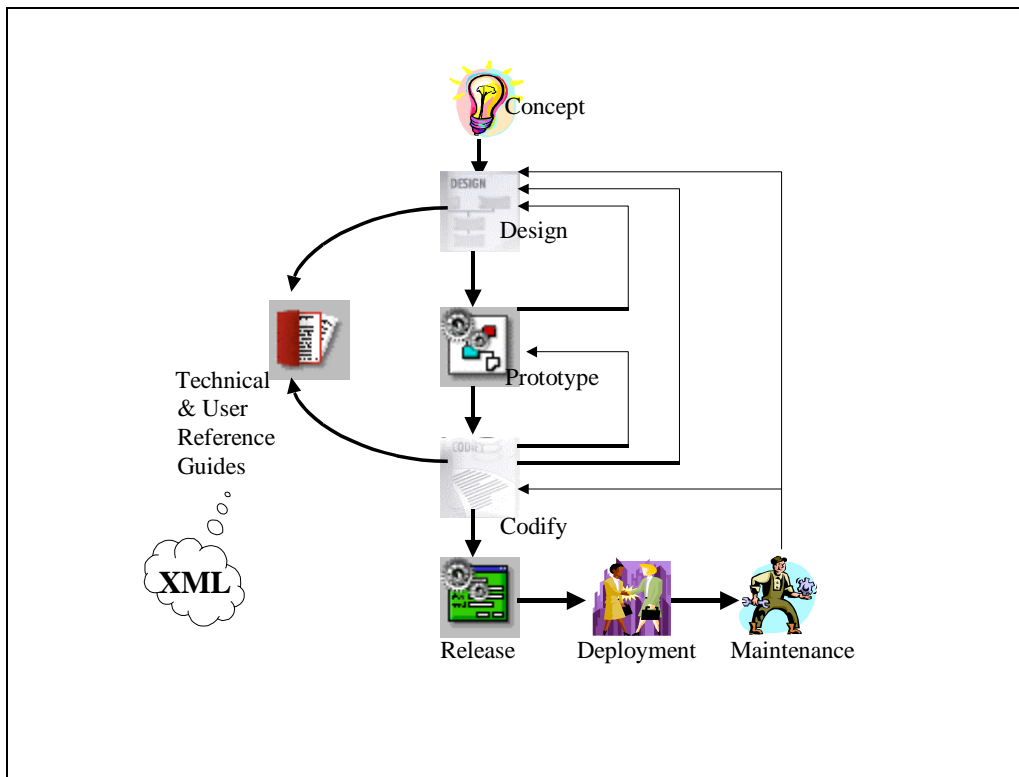
Can more programmers work on the same project?

Yes, that's what our customers do the most.

What about support?

English speaking specialized staff will support you.

CODEPAINTER methodology



CODEPAINTER performances

- **Increase productivity**
 - Get the best of your programmers
 - Keep your projects under control
- **Save money**
 - No royalties due for generated applications
 - Minimize your time-to-market
 - Cut application maintenance costs
 - Reduce training costs
 - Increase learning curve
- **Maximize satisfaction of your customers**
 - Match customer requirements: on time, on budget & on target
 - Easy End User customizations in terms of Query, Menu, Zoom & Report

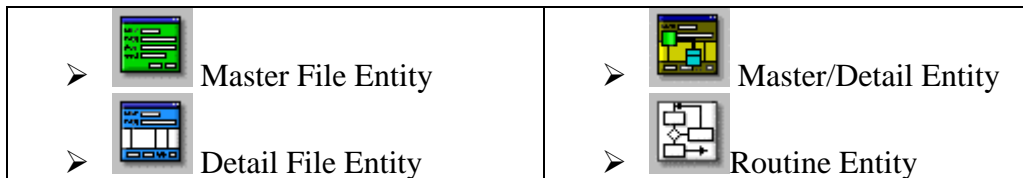
CODEPAINTER attractions

CodePainter major attractions can be especially appreciated by Software Developers. CodePainter is extremely user-friendly and easy to use.

- ***Object-Oriented Domain Analysis for Business/Commercial Applications Development***
- ***Design through predefined Entities***
- ***Data definition independent from target Database Servers***
- ***Application source code: automatically generated in standard common programming languages***
- ***Cost Free Release: no royalties due***
- ***Maintenance fully supported by the tool***
- ***Application spoken language: customizable***
- ***User Reference & Technical Documentation: automatically generated***

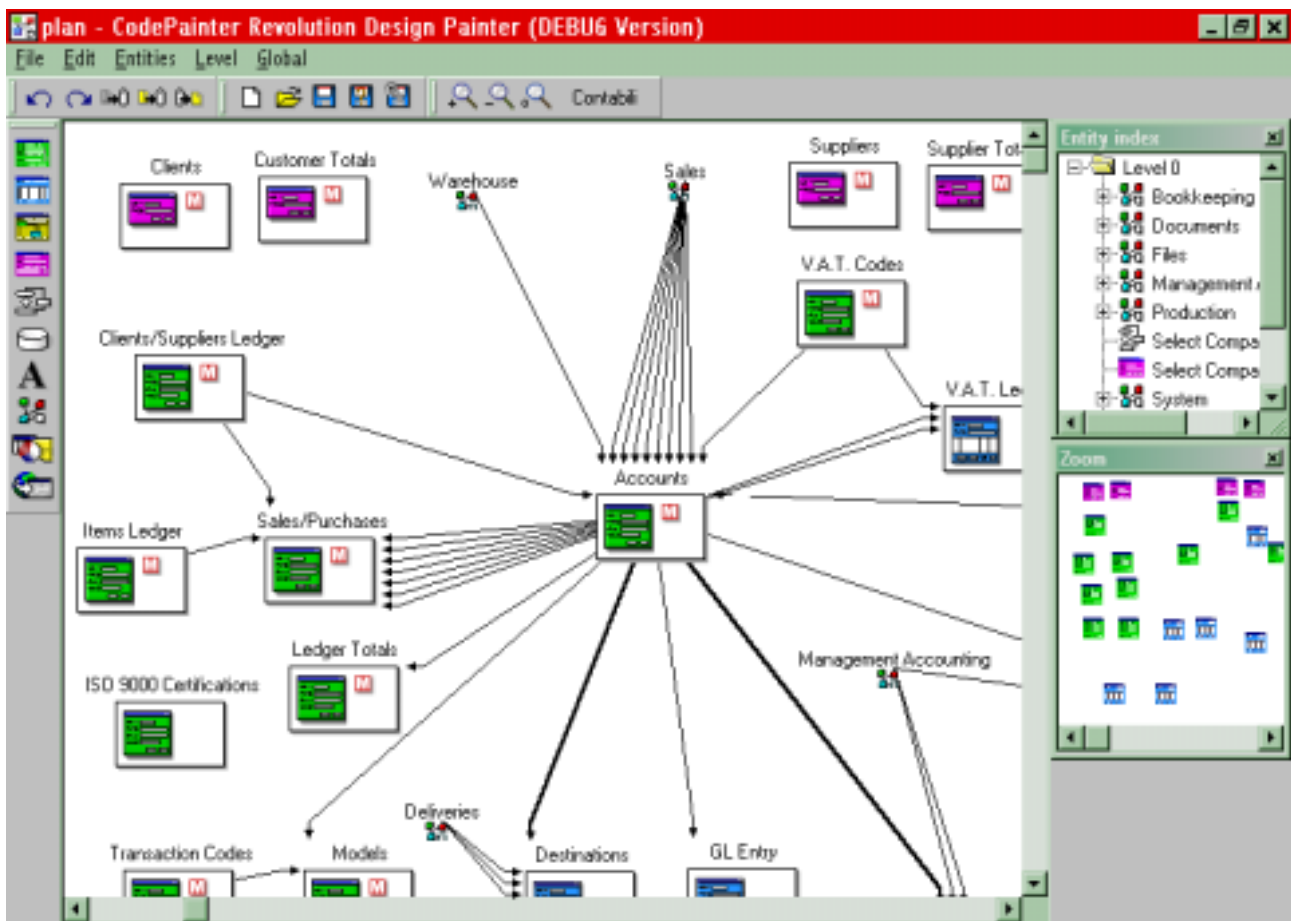
Object-Oriented Domain Analysis for Business Applications

CodePainter is a C.A.S.E. tool specialized in generating Business Applications. When you want to develop a software application you usually go through a domain analysis of the problem. Being specialized in Business Applications, CodePainter does the job for you through a set of predefined entities:



Design Through Predefined Entities

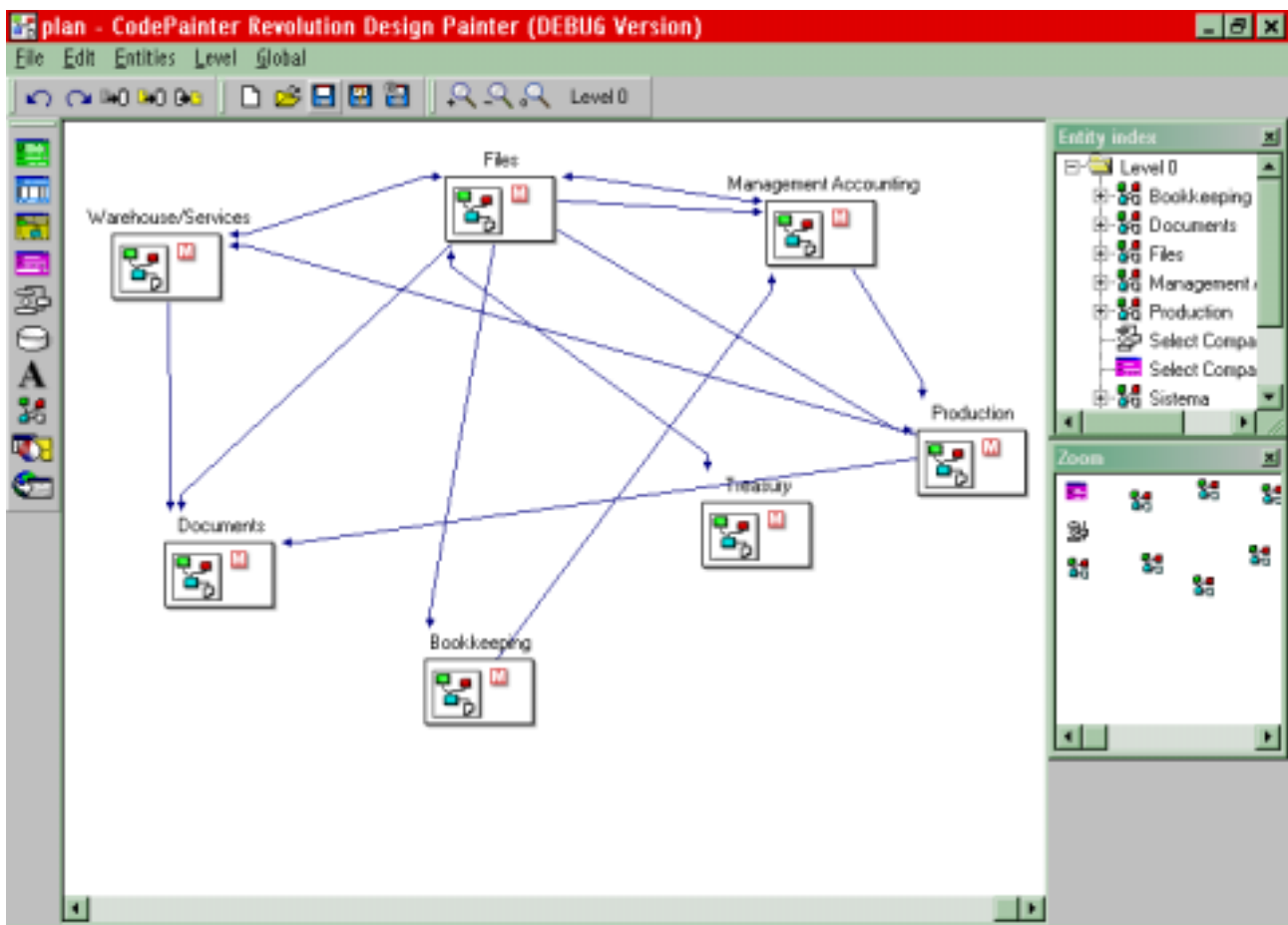
The project is 'painted' using advanced graphical tools.



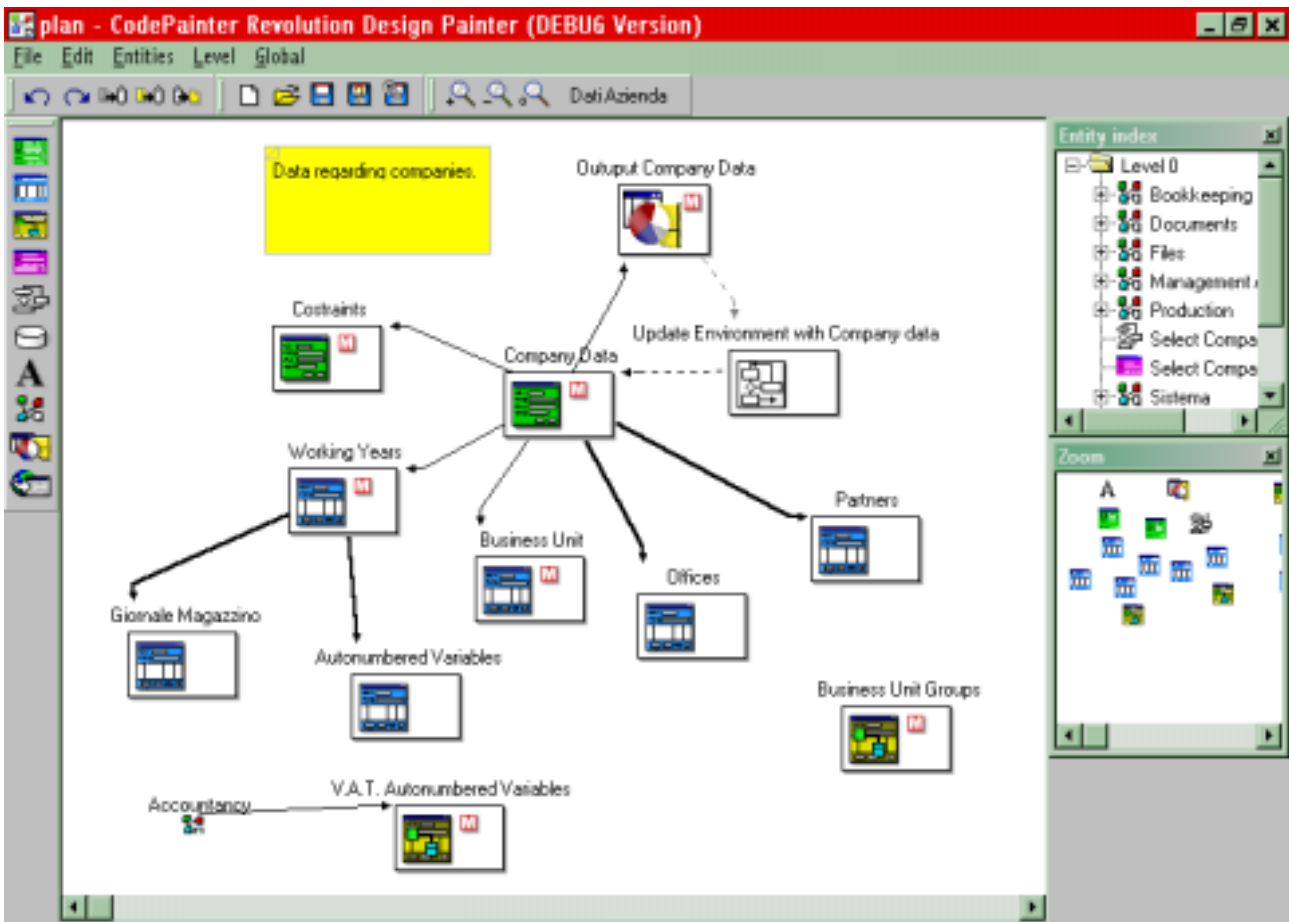
First of all you place the predefined entities on your design plan reflecting your project structure. You then simply draw the links between entities to define complex properties such as cardinalities and referential integrities.

As the project becomes larger you can improve design organization introducing:

- Group objects
- Visibility links



You can also introduce *String* objects and *Output* entities to enhance plan documentation.

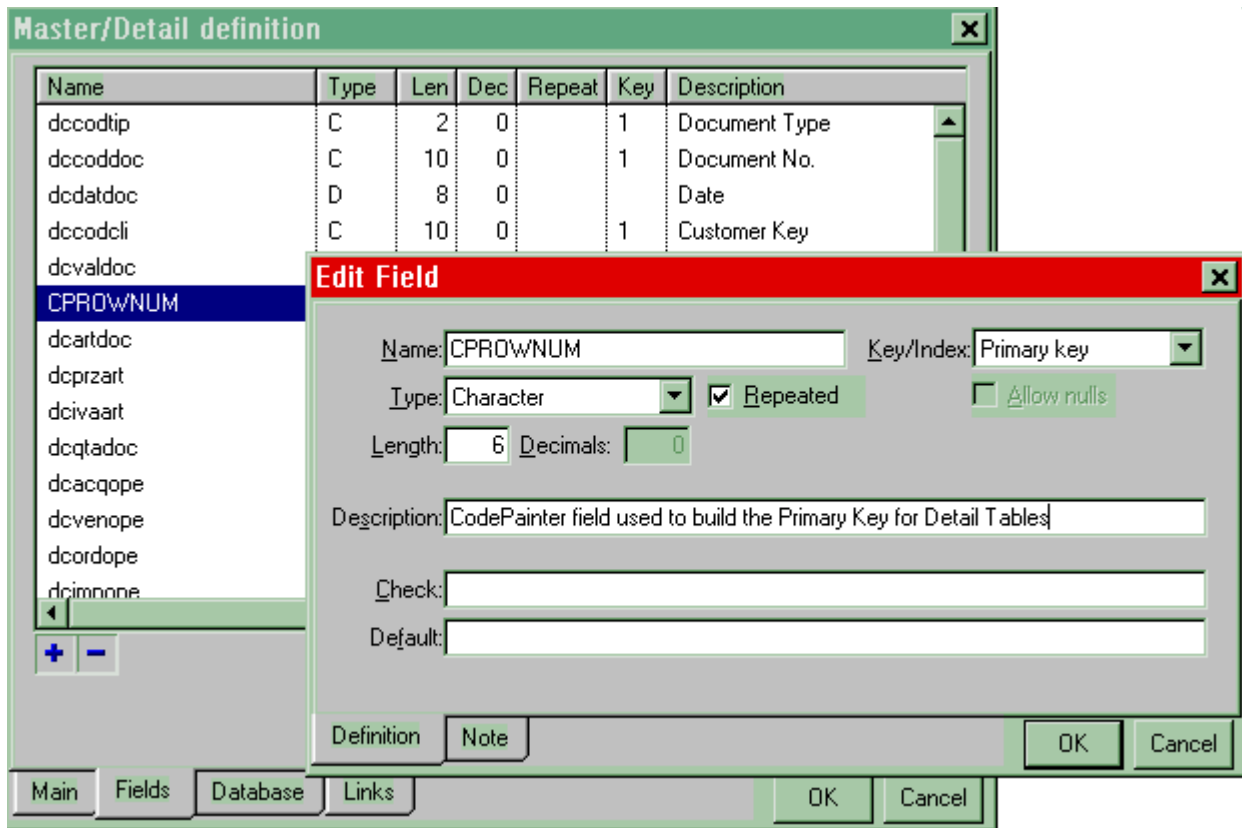


CodePainter supports team working through  External entities and multiple design plans, i.e. an entity defined in plan 1 by user A can be linked to another entity defined in plan 2 by user B.

Data Definition Independent from Target Database Servers

Once your project plan is completed, you start defining Entities' properties:

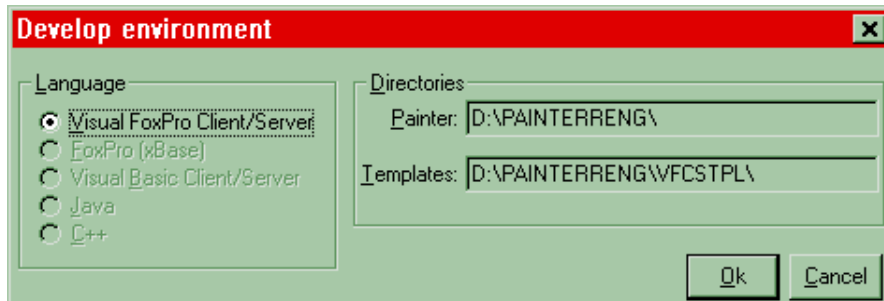
- Entity Name (also used for the Standard Menu generation),
- Database Fields &
- Relationships between linked fields.



The database definition is totally independent from the target database server. Various database servers are supported, such as SQL Server, Oracle, IBM DB2 and coming soon Informix.

Application Source Code: Automatically Generated in Standard Common Programming Languages

CodePainter supports different programming languages, such as Visual Fox Pro. The support for other programming languages can be bought separately.



After having completed your design plan, you can generate an application prototype simply by pressing the



Design Generation button.

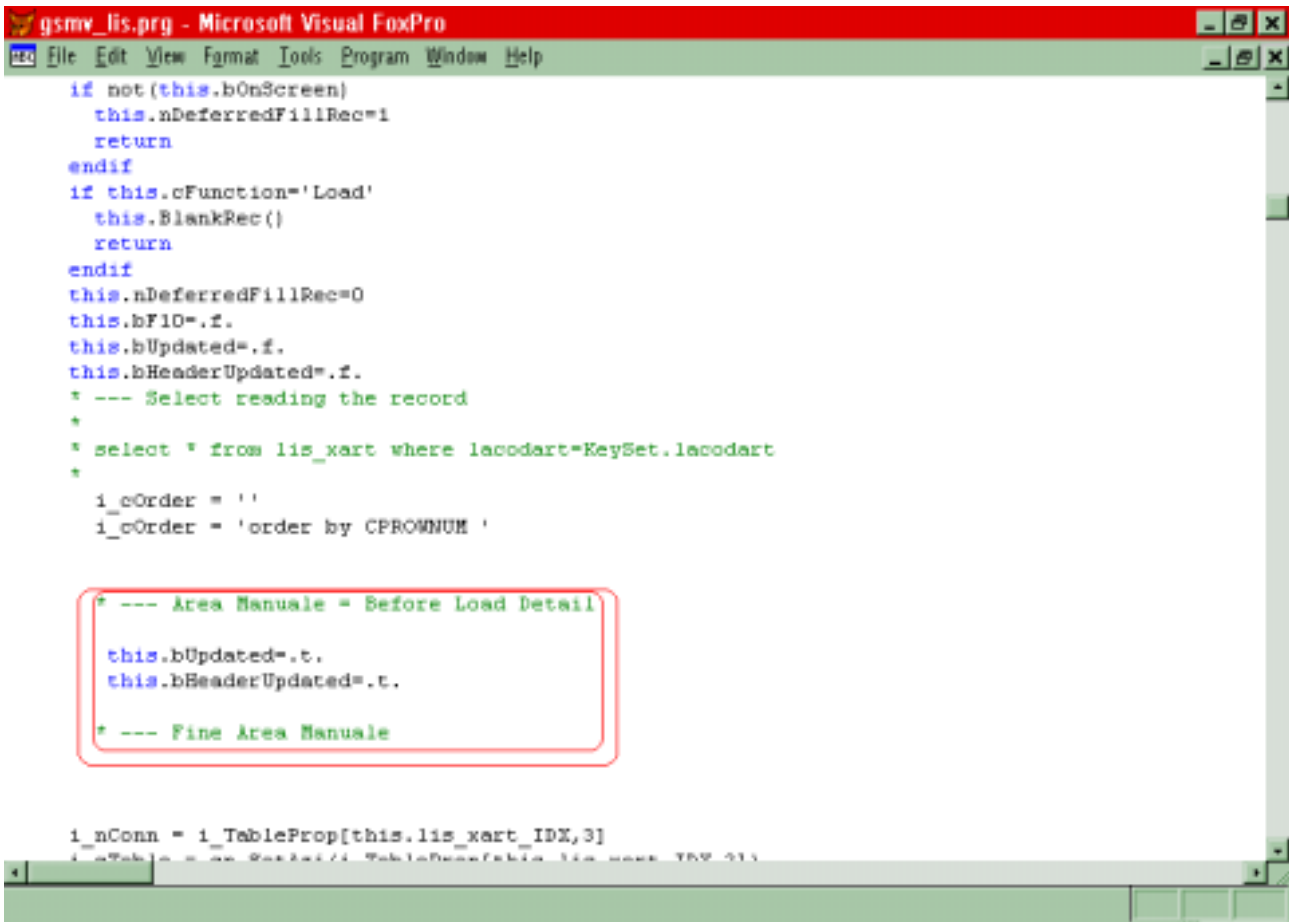
An example of the generated code is shown in the following picture:

```
gsmv_lis.prg - Microsoft Visual FoxPro
File Edit View Format Tools Program Window Help
add object oEndHeader as BodyKeyMover with nDirection=1
*
* --- BODY transaction
*
add object oBody3D as shape with left=56,top=40,;
width=401+17,height=int(fontmetric(1,"Centaur",12,"")*6*1.3)-2,specialeffect=0

add object oBody as StdBody noinit with ;
left=59,top=41,width=399+17,height=int(fontmetric(1,"Centaur",12,"")*6*1.3)-4,columncount=0,G
HeaderHeight=0,DeleteMark=.f.,RecordMark=.f.,scrollbars=2,enabled=.f.,;
cLinkFile='listini]'

Proc oBody.SetCurrentRow()
thisform.lockscreen=.t.
select (this.parent.oContained.oTrsName)
if recno() <> this.nAbsRow
if this.nAbsRow <> 0 and inlist(this.parent.oContained.oFunction,'Edit','Load')
if this.nAbsRow <> this.parent.oContained.i_lastcheckrow and !this.parent.oContained.CheckR
this.parent.oContained.i_lastcheckrow=0
this.parent.oContained.__dummy__.enabled=.t.
this.Parent.oContained.__dummy__.SetFocus()
select (this.parent.oContained.oTrsName)
go (this.nAbsRow)
this.SetFullFocus()
if !isnull(this.parent.oContained.oNewFocus)
this.parent.oContained.oNewFocus.SetFocus()
this.parent.oContained.oNewFocus=.NULL.
endif
this.Parent.oContained.__dummy__.enabled=.f.
thisform.lockscreen=.f.
return
```

In addition you can integrate the automatically generated source code writing line codes in dedicated Manual Blocks. These blocks are not overwritten even if the source code is regenerated.



```
gsmv_lis.prg - Microsoft Visual FoxPro
File Edit View Format Tools Program Window Help
if not(this.bOnScreen)
  this.nDeferredFillRec=1
  return
endif
if this.cFunction='Load'
  this.BlankRec()
  return
endif
this.nDeferredFillRec=0
this.bF10=.f.
this.bUpdated=.f.
this.bHeaderUpdated=.f.
* --- Select reading the record
*
* select * from lis_xart where lacodart=KeySet.lacodart
*
  i_cOrder = ''
  i_cOrder = 'order by CPRONUM '

* --- Area Manuale = Before Load Detail
this.bUpdated=.t.
this.bHeaderUpdated=.t.
* --- Fine Area Manuale

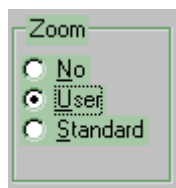
i_nConn = i_TableProp[this.lis_xart_IDX,3]
i_nTable = i_TableProp[this.lis_xart_IDX,3]
```

Release Cost Free: No Royalties Due

You can freely distribute the generated source code, as well as the application in executable format. All you need to do so is the license for the programming language, in order to compile you source code. This means that there are no additional fees for any generated application, neither per user, nor per server.

Maintenance Fully Supported By The Tool

You can easily maintain your applications, indeed you can go back to any stage of the production cycle, e.g. you can reengineer the Design plan any time and CodePainter will automatically generate the required up-dates. Thanks to Visual Tools you can easily add Queries, Zooms, and Reports.



Application spoken language: customizable

CodePainter default languages are English and Italian, but you can create applications in different languages, simply translating the file containing system message Macros.

User Reference & Technical Documentation: automatically generated

Just write your documentation notes for your project elements using the dedicated 'Note' tabstrip. These notes will be included in the Documentation, which is generated automatically simply clicking:



Documentation files are generated in XML format and can be browsed with Microsoft Internet Explorer.



CODEPAINTER's applications framework

With outstanding difference from other C.A.S.E. tools, CodePainter provides all generated applications with a framework where a set of utilities suitable to efficiently support business activities are made available. These utilities are useful for both programmers and End-Users, to customize their applications even further! The generated application and CodePainter deliver a unique development framework.

- **Client-Server transactional environment**
- **Security Control Tools**
- **Database Administration**
- **User & Group Administration**
- **Visual Query, Menu, & Zoom**
- **Instant Messaging, Post-In & Warnings**
- **On-line User Translations**

Client Server transactional environment

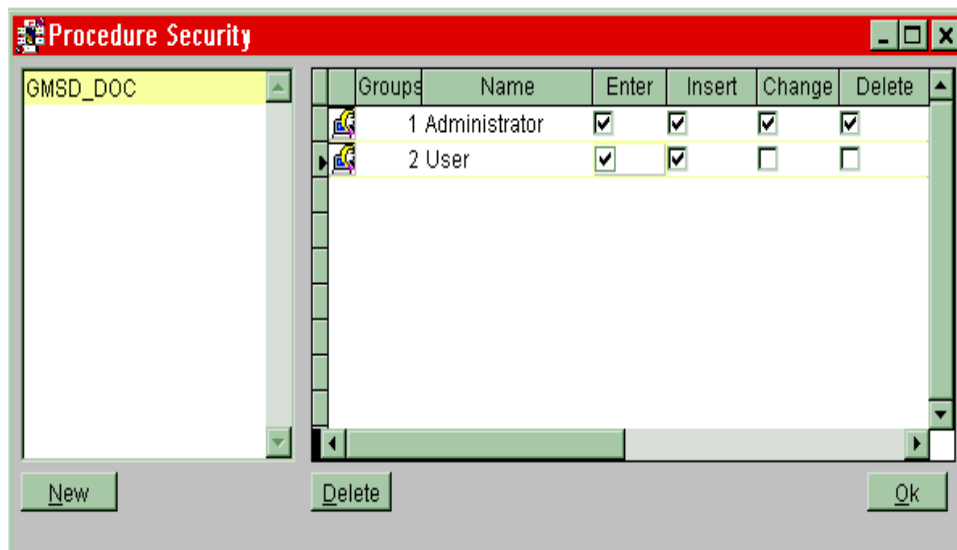
Applications created with CodePainter are Client/Server and all queries are executed by the Database Server. Business rules ensure ACID operations: transactionality and atomicity are well supported and the programmer is effectively driven by CodePainter.

CodePainter can use different kinds of relational databases, such as SQL Server, Oracle, etc.

Security Control Tools

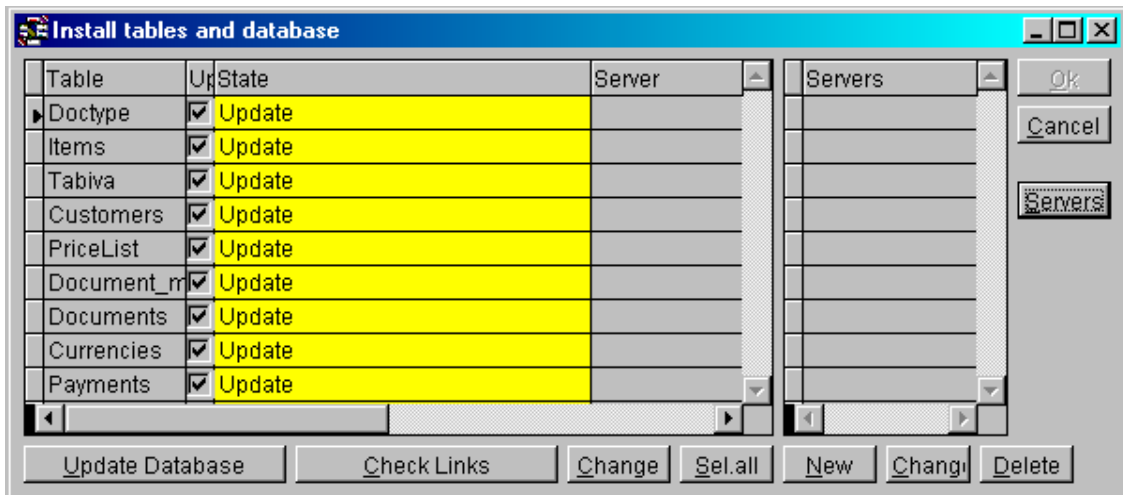
Security controls can be defined for each single application function and set for each user group. Possible access levels are:

- Enter
- Insert
- Modify
- Delete



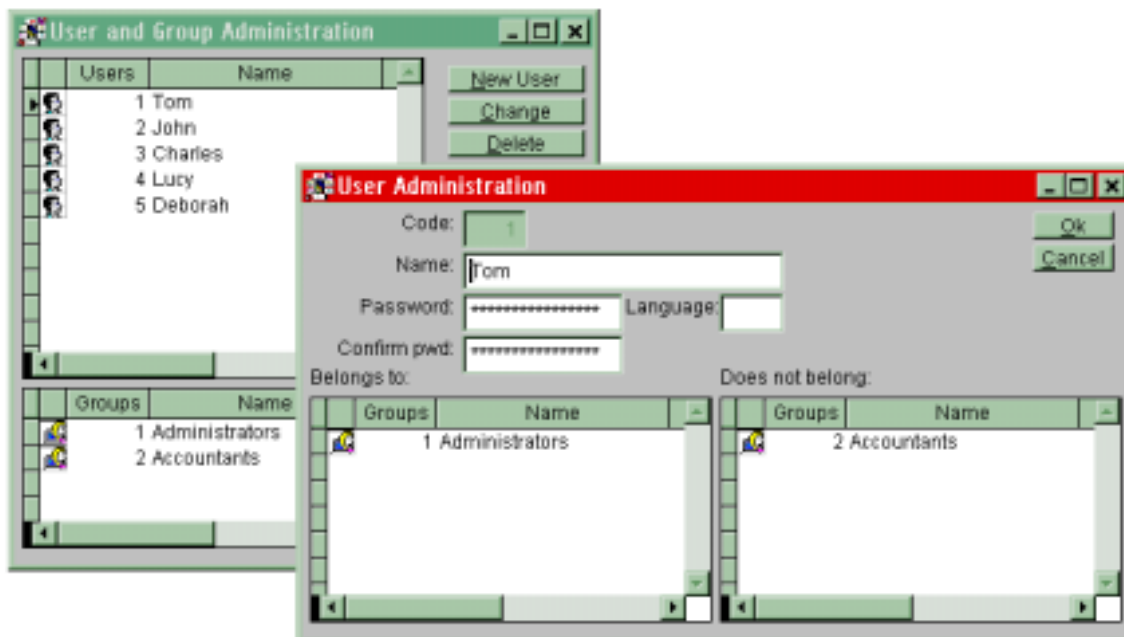
Database Administration

This tool allows connecting to different database servers and generates proper SQL sentences required to create & update database tables. The 'Database Administration' tool is automatically executed the first time you run your application or when you run it after having regenerated the design plan.



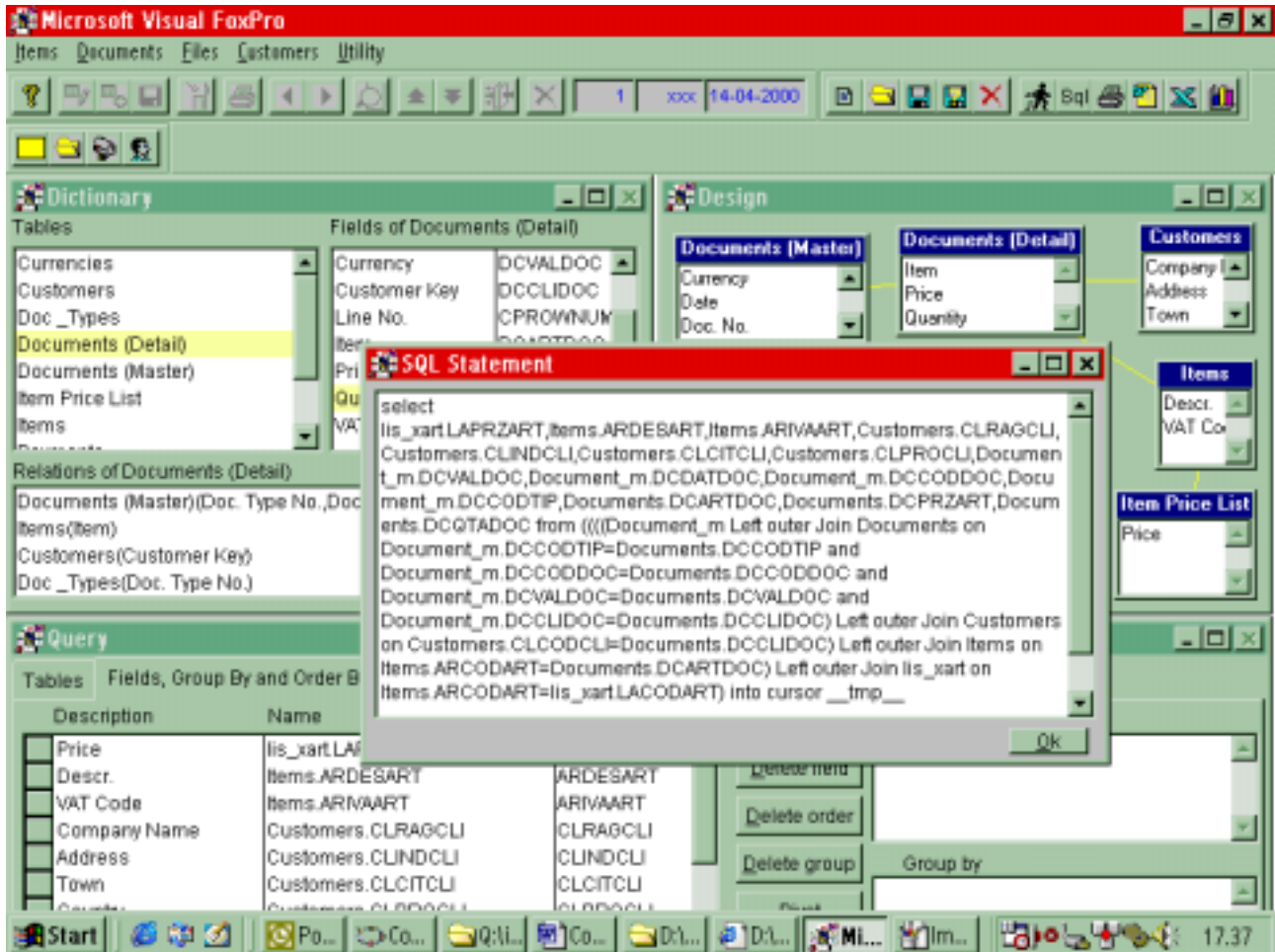
User & Group Administration

You can create & modify users and groups. The same user can belong to more groups. It is possible to define a different password for each user.



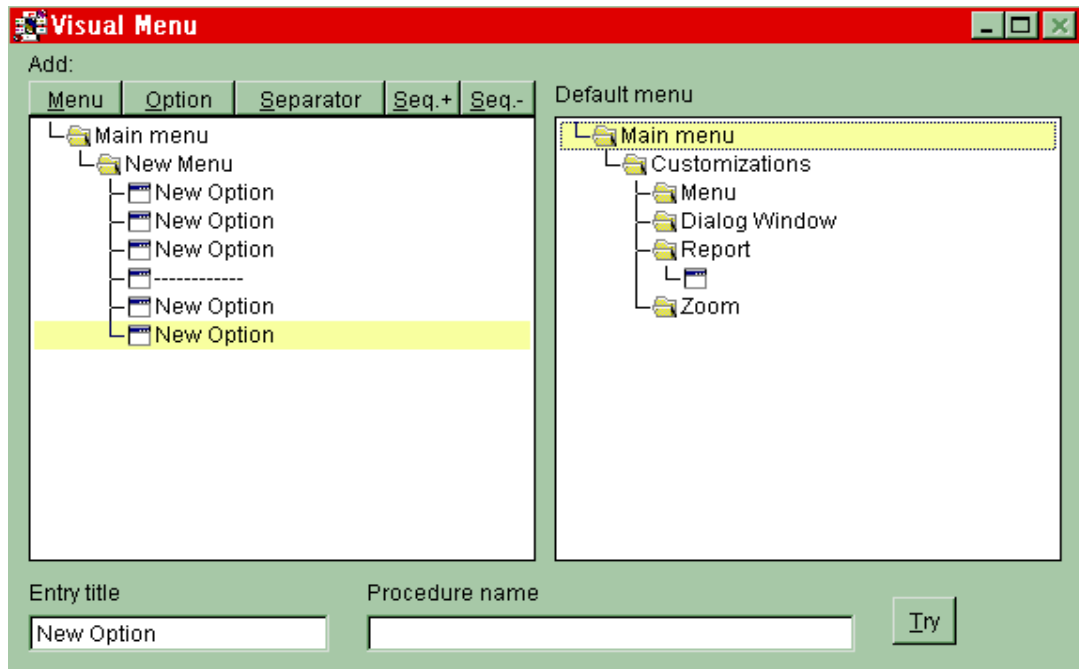
Visual Query & Visual Zoom

With Visual Tools it is possible to 'paint' SQL sentences easily. Queries can be used to build customized displays of database data (Zoom) or to pass on data to the Visual Fox Report Editor. In addition you can default Zooms for users or groups.



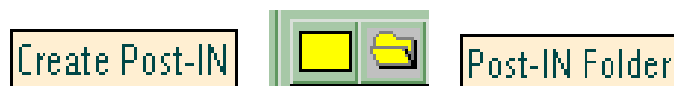
Visual Menu

The Visual Menu tool allows creating different application standard menus for both, users and groups.



Post-In

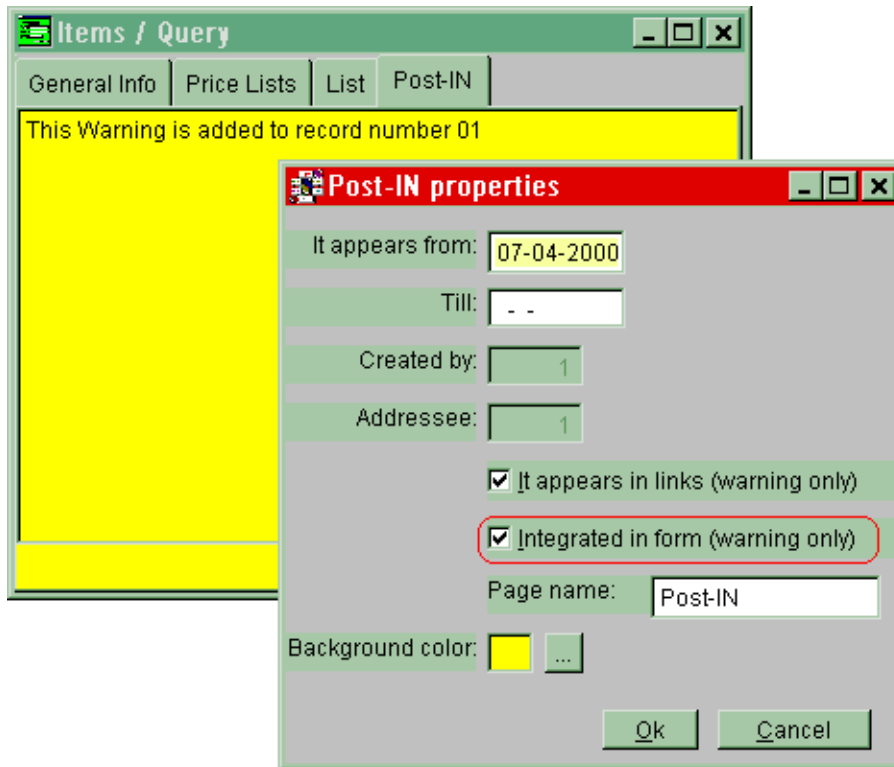
This feature allows you to stick “electronic memos” on the application desktop, in order to take notes. These memos are saved in a dedicated database table and restored on the screen when the application is run. All Post-Ins can be accessed and maintained through the Post-IN Folder on the application toolbar:



An expiry date can be defined for each Post-In.

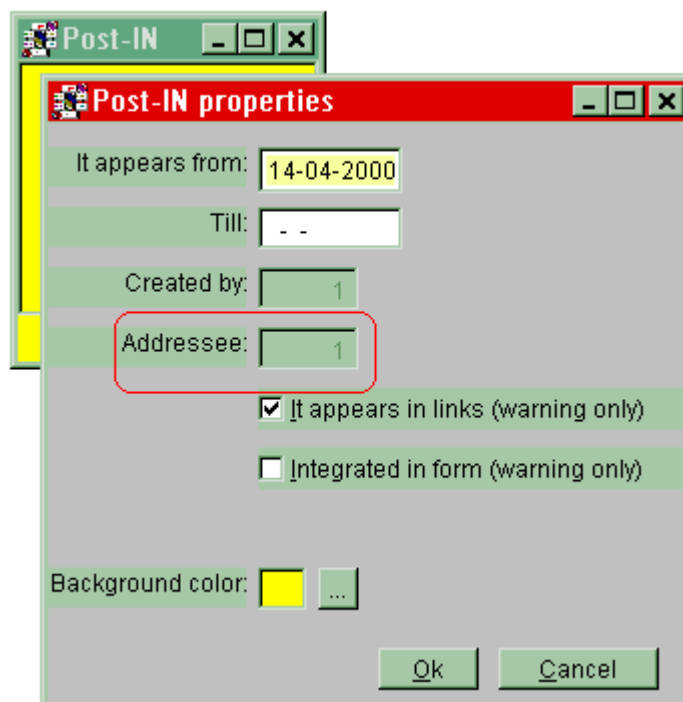
Post-In as Warning

Warnings are used to temporarily extend information on records: simply drag & drop a Post-In on a selected record. The Warning can be integrated in the record as a new window sheet.



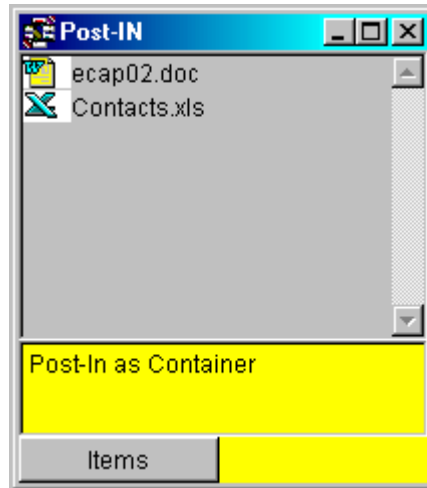
Post-In as Instant Messaging

Post-Ins can be used to send messages between users. The message will be displayed on the addressee's desktop.



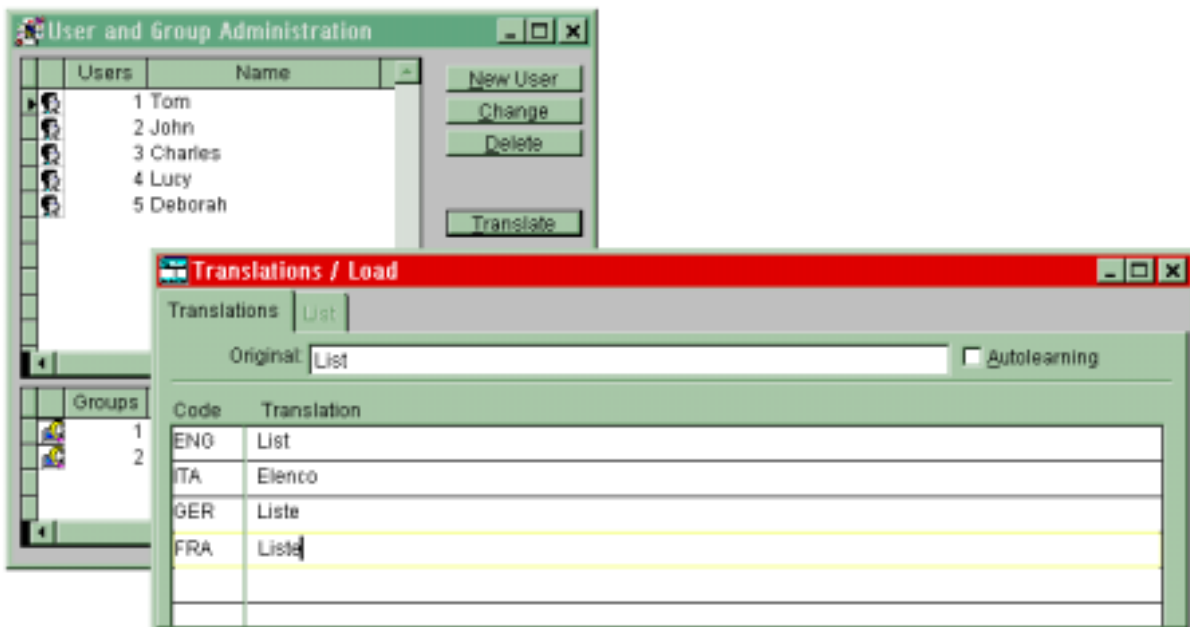
Post-In as Container

Post-Ins can contain plain text or MS Word Documents, MS Excel Sheets and MS Graphs can be attached. Moreover, Post-Ins can contain a button linked to an application function.



On Line User Translations

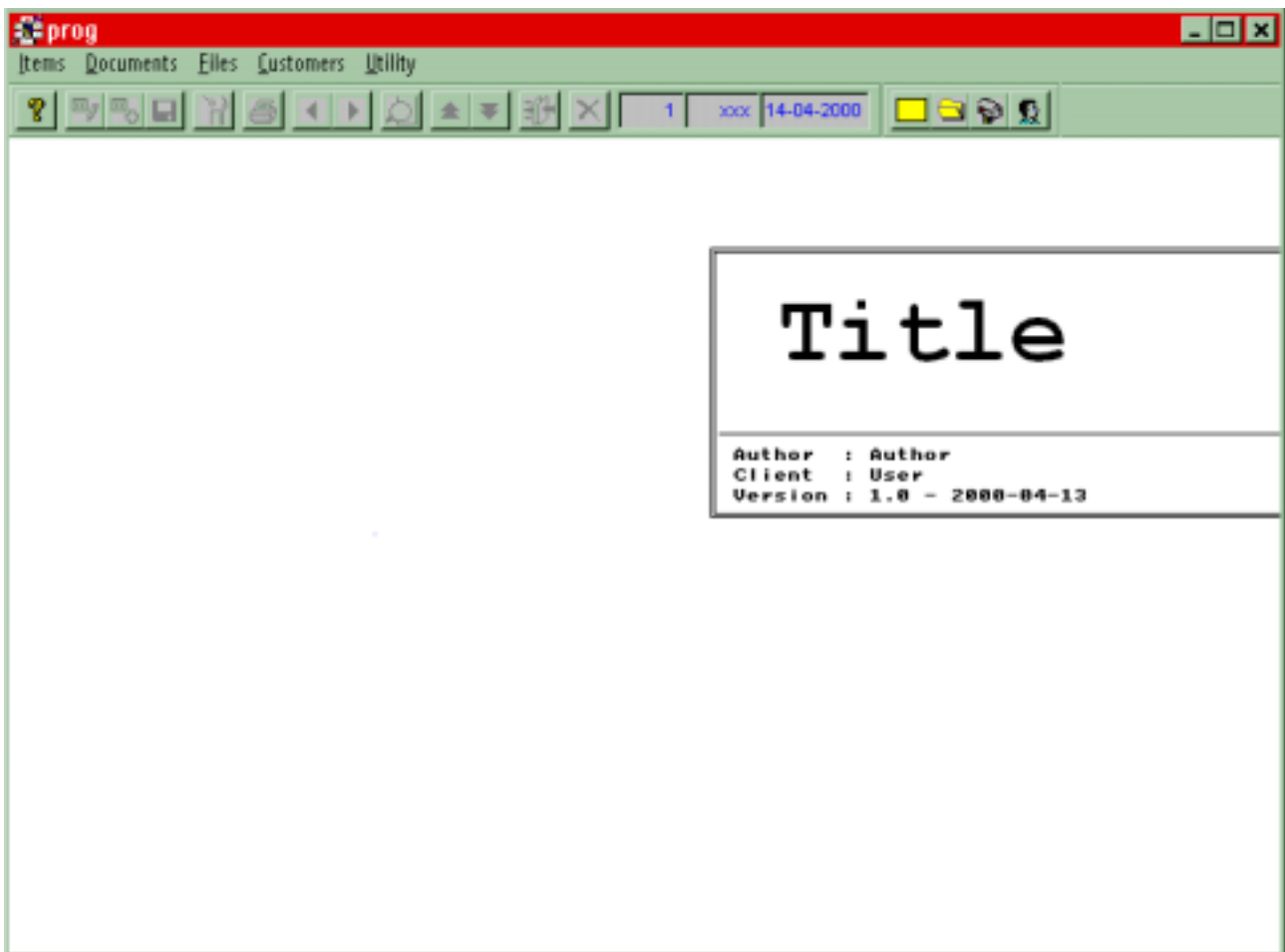
It is possible to translate menu items and application window options on-line. Each user potentially can have a different application language. The translation tool has the extraordinary 'Autolearning' Option that fills the languages database while browsing in the application.



CODEPAINTER's generated application

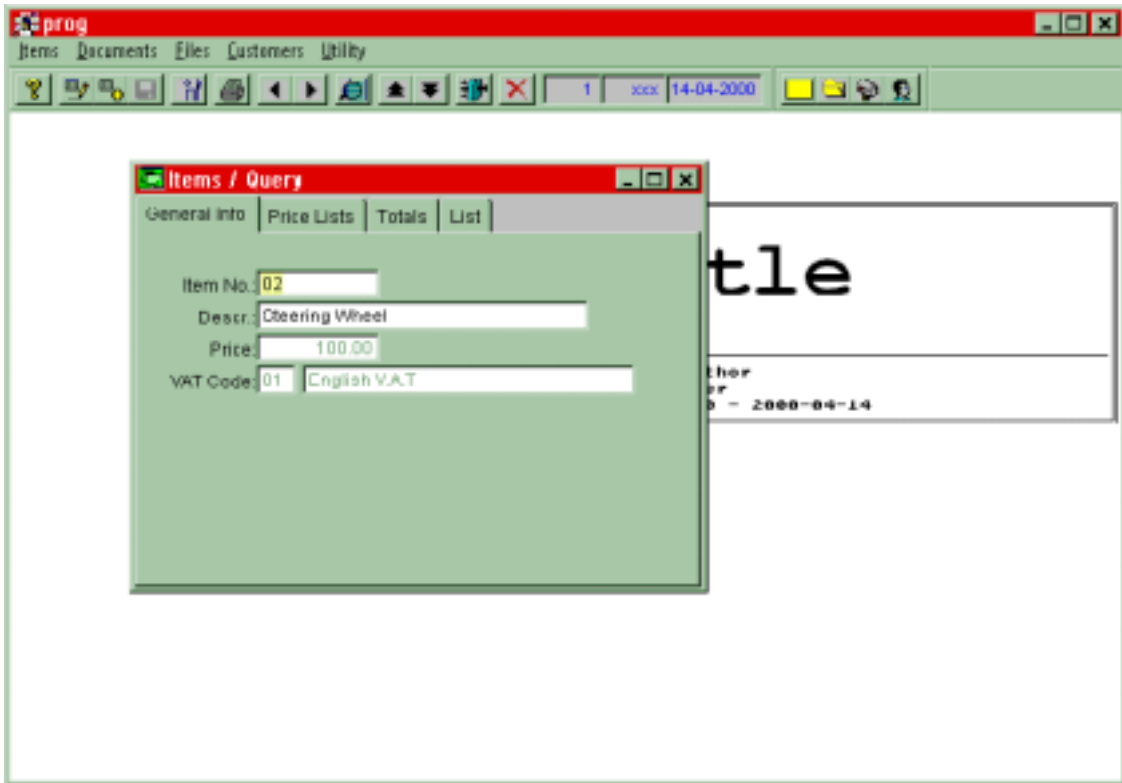
Abstract: this section shows how a small Business Application designed with CodePainter works. Both, Software Developers and End Users will appreciate how Master Files, Detail Files and Master/ Details become a fully functioning Application. Finally you will see an automatically generated CodePainter Zoom showing all data base fields of an entity. As you will notice, all the application framework presented below is fully integrated in generated source code.

When the Design and the Codify phases are terminated, CodePainter generates the final application source code. Compile and run it and you will get the first application window, as shown in the following examples:

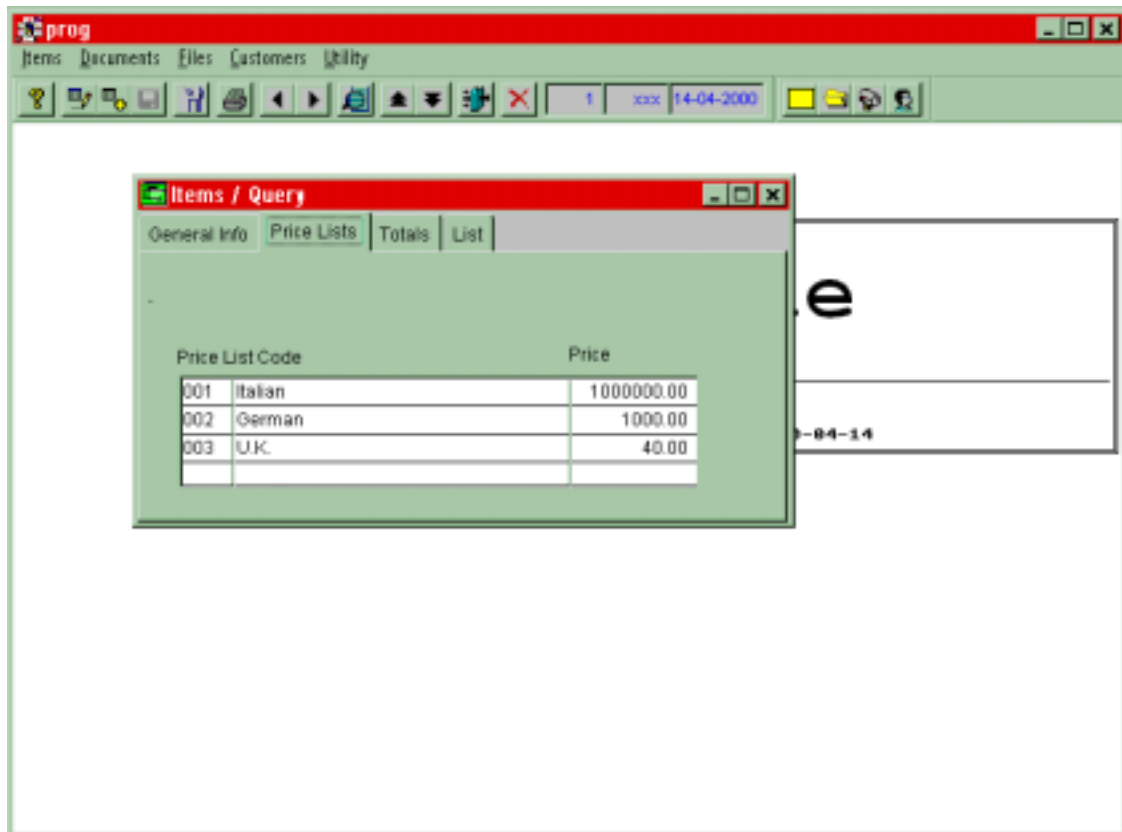


Each application has standard toolbars and function keys. The menu is automatically generated and can also be customized. Examples of how entities are displayed in the application follow:

- Master File Entity



➤ Detail File Entity



This detail file entity is integrated in the Master File.

➤ Master/Detail Entity

prog

Items Documents Files Customers Utility

1 XXX 14-04-2000

Documents / Query

Pag.1 | List

Doc. Type No.:

Doc. No.: 000000000

Date: 01-01-2000

Currency: 0

Customer Key: 0000000001 Tom Brown Ltd

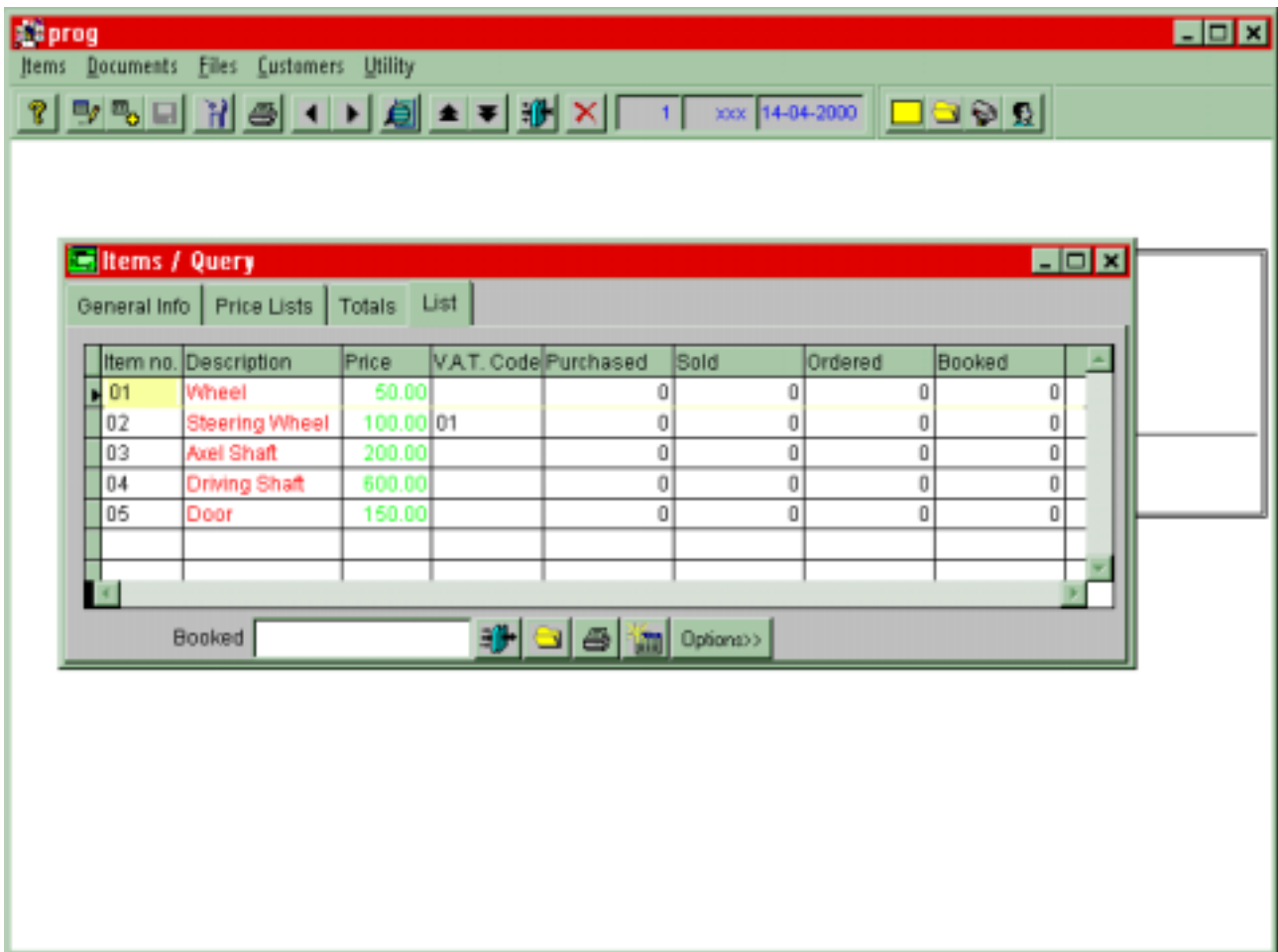
Item		VAT Rate	Price	Quantity	Total	
01	Wheel		0	50.00	10	500
02	Steering Wheel		0	100.00	15	1500
03	Axel Shaft		0	200.00	35	7000

Tot. Taxable Amount: 9000

VAT Tot. Amount: 0

Total Amount: 9000

Standard Zooms are always displayed in the 'List' tabstrip. Below you see the 'Item List' as an example:



All application framework functionalities described in the previous section can be found under the 'Utility' menu and in the standard toolbar.