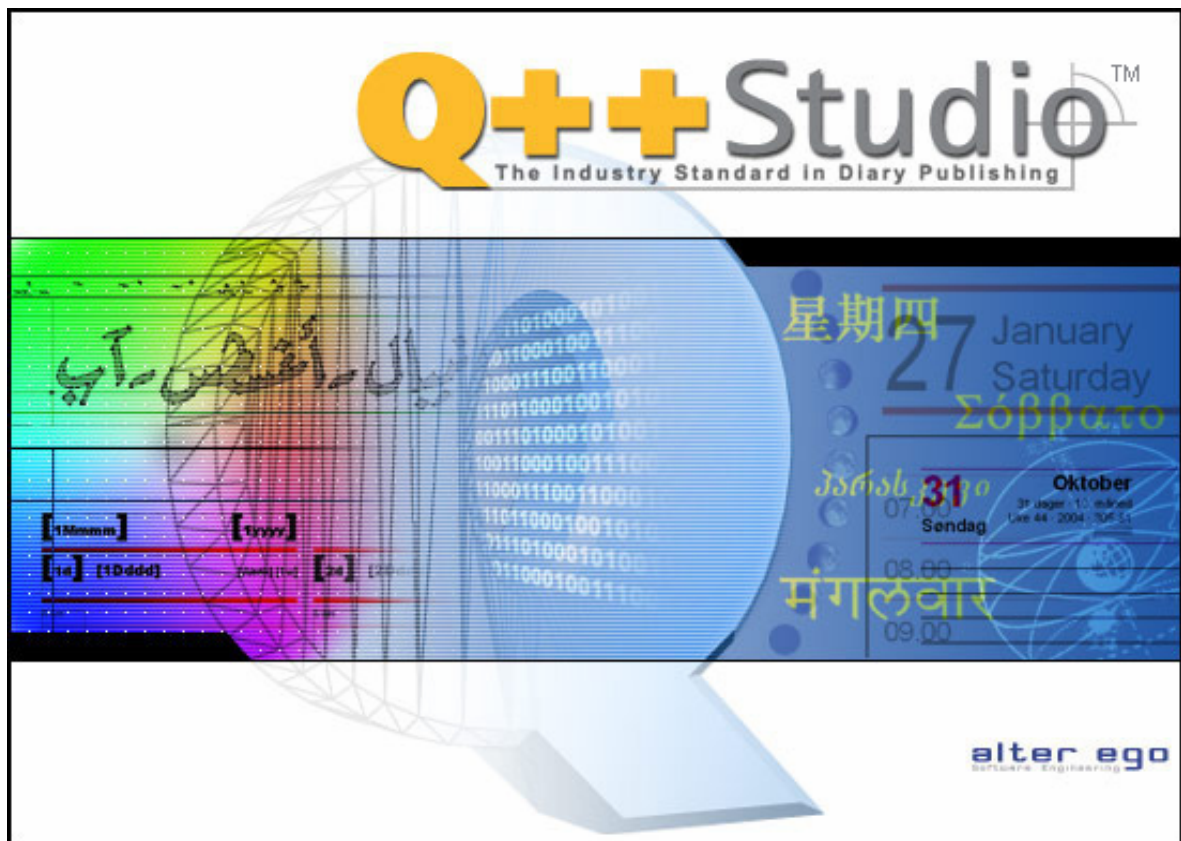


# Presenting **Q++ Studio**



*Integrated development environment, dedicated to the creation, customization and updating of diaries in QuarkXPress file format, and the management of their data and business rules.*

**alter ego**  
Software Engineering



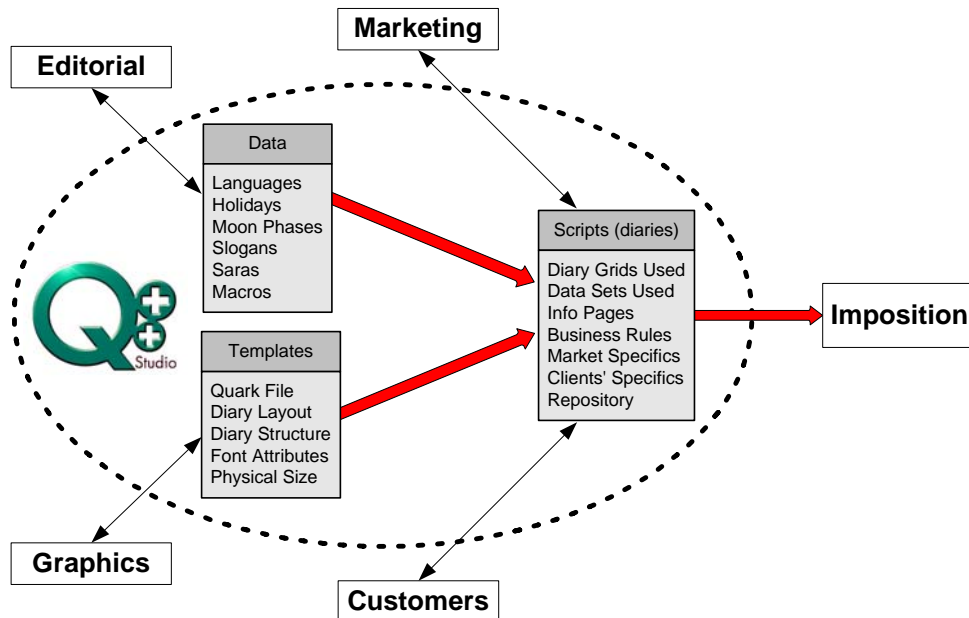
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## Introduction

Q++ Studio (or simply, Q++) is a Windows development environment used to create and automate the updating and customization of diary grids, which are combined with information pages, customer artwork, diary-related data, and business rules to generate complete diaries in QuarkXPress file format.



Q++ is a mature, yet constantly evolving product, used since late 1997 to produce over 600 million diaries in many different diary markets. Q++ has been successfully tested with almost every conceivable type of diary, as can be seen from the following list of current users:

 <b>Argentina</b> Agendas Morgan	 <b>Belgium</b> Brepols	 <b>Bulgaria</b> Vertical-7	 <b>Chile</b> Agendas Rhein	 <b>China</b> Tai Shing
 <b>Colombia</b> D'Vinni	 <b>Denmark</b> Mayland X-paper	 <b>Estonia</b> BüroDisain	 <b>Finland</b> Ajasto	 <b>France</b> Quo Vadis
 <b>India</b> Eagle / Srinivas Thomson Press	 <b>Italy</b> Diarpell Arti Grafiche Johnson	 <b>Korea</b> Yangjisa	 <b>Malaysia</b> UPA Press Ginhua PSN	 <b>Norway</b> Emil Moestue Grieg Kalender
 <b>Poland</b> Edica	 <b>Portugal</b> Ambar	 <b>Singapore</b> Olympia Diary Grandluxe	 <b>South Africa</b> File-a-Diary	 <b>Spain</b> Simancas
 <b>Sri Lanka</b> Vishva Lekha	 <b>Sweden</b> Almanacksförlaget Burde Förlags	 <b>Turkey</b> GIPTA/ACAR Levent Ofset	 <b>UK</b> Charles Letts Filofax	 <b>USA</b> Geigers

## Philosophy

The essential elements of the Q++ philosophy are:

- Industry Knowledge: Q++ was developed, and is maintained, by diary industry specialists. Not only does Q++ cover 99% of the features identified in diary editors' product ranges, but it does so naturally, without the need for extensive parameterization. Diary industry knowledge is already built into Q++. The fact that training and support is done by diary industry specialists is an additional advantage. Q++ is all about diaries, nothing else.
- Superlative Support: Despite all efforts made to make Q++ as easy to use as possible, it is a product with a full feature set and the user documentation (p.25) can sometimes be daunting. Therefore Q++ offers technical support (p.28) that addresses each user's needs in a prompt and detailed manner. You have never experienced support such as the support offered to Q++ Studio users.
- Regular Updates: Diary typesetting is complex and evolving. Clients are always looking for new features to differentiate their diary from others. To keep abreast of such needs, regular updates based on user feedback (p.29), are at the heart of Q++.
- Ease of use: Q++ is easy to use, well documented, forgiving of user errors, and fast. This lets users learn by trial and error, and experiment with new features on their own. Access to all the elements of Q++ (including QuarkXPress files) is centralized in the Q++ main window, which helps Mac users which may not be fully comfortable navigating the Windows interface.
- Industry Standards: Diary grids and output diary files are in the QuarkXPress file format. This allows users to leverage their existing desktop publishing skills, makes it easier to recruit new users, and means that all the features available under QuarkXPress (fonts, colors, baseline shifts, kerning, grouping, locking ...) can also be used to create diary grids which look exactly the way you want. If any aspect of a diary cannot be automated using Q++, it is easy to open the output file in Quark and modify it manually (instead of hacking through an EPS file as other products require).
- Object-Oriented Design : Constructing a diary in Q++ is a bit like using a Lego set; one chooses diary grids, languages and holidays and then defines beginning and ending dates and any specificities (such as holidays in a second color). Q++ then saves this *recipe* for future reuse and generates the diary automatically. The 3 principal components of Q++ (see diagram above) are treated independently of one another, which leads to across-the-board time-saving reuse.
- Openness: Despite the highly integrated nature of its environment, Q++ makes it easy to exchange data with remote Q++ users in the world, an experienced user community (p.28). All data managed by Q++ can easily be exported to MS-Excel, which makes it easy to send data to the proofreading and editorial departments (p.19). The use of QuarkXPress files means that Q++ can directly include information pages or advertising pages supplied by clients.

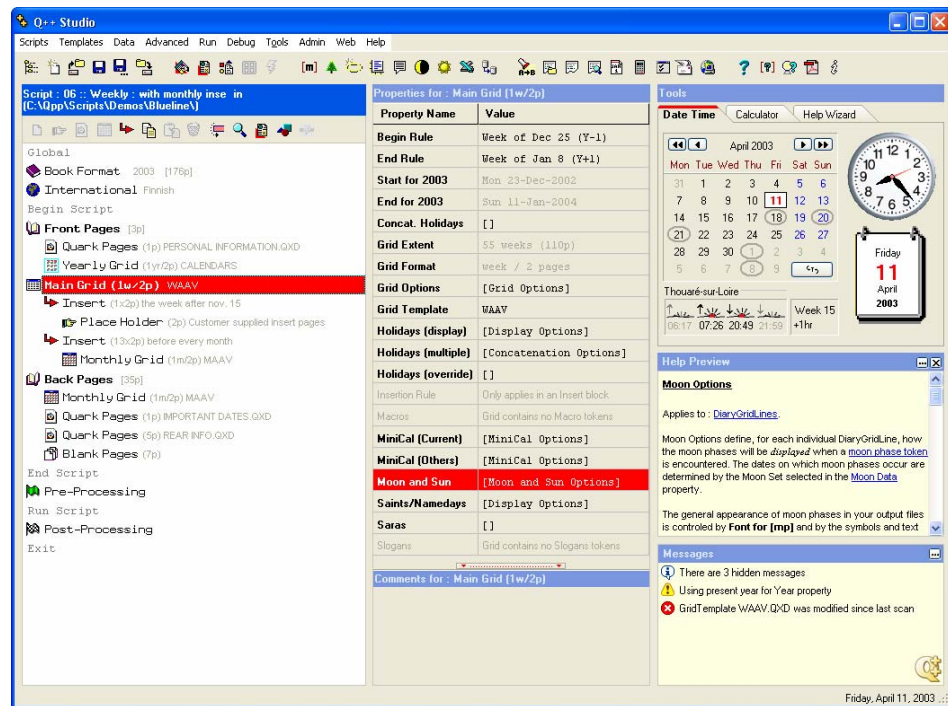
## The Q++ Environment

The Q++ environment is totally integrated. From within the Q++ main window, users can create and edit diary grids (p.6), manage diary-related data (p.11), and combine these and customization options (p.7) to have Q++ generate diary files (p.6).

This integration allows users to work more productively as they do not have to navigate through Windows directories, or launch separate programs, to find or edit files. In the case of new users, the time savings are even greater as they do not have to learn where to find grids, then where to find holidays lists ...

During the fall rush period this integration makes it easier to bring in temporary workers. Learning Q++ is also made easier by its modern and intuitive user interface (p.25).

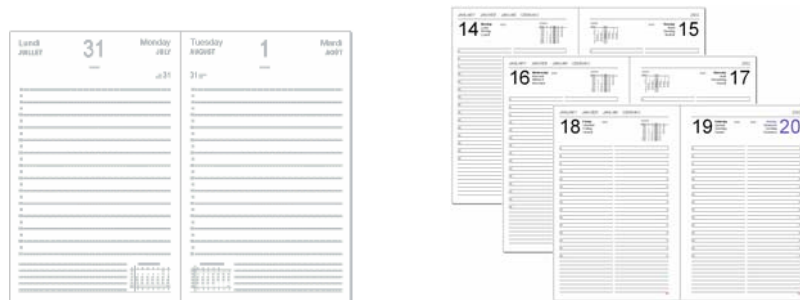
Q++'s user friendly and integrated interface places Q++'s entire palette of features at the user's fingertips, while shielding him/her from the underlying intricacies of the system.



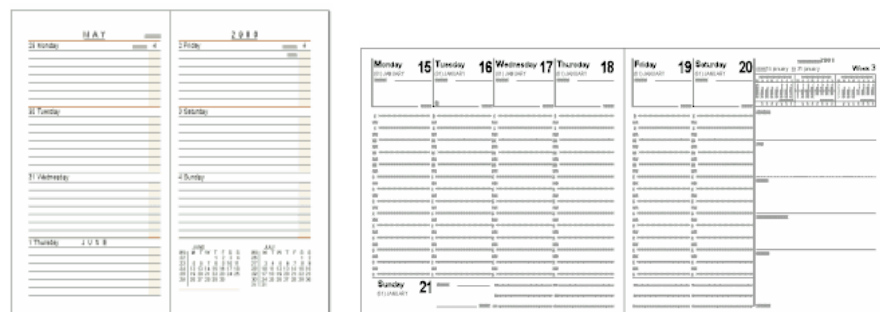
## Diary Layouts

### Diary Formats *(the big picture)*

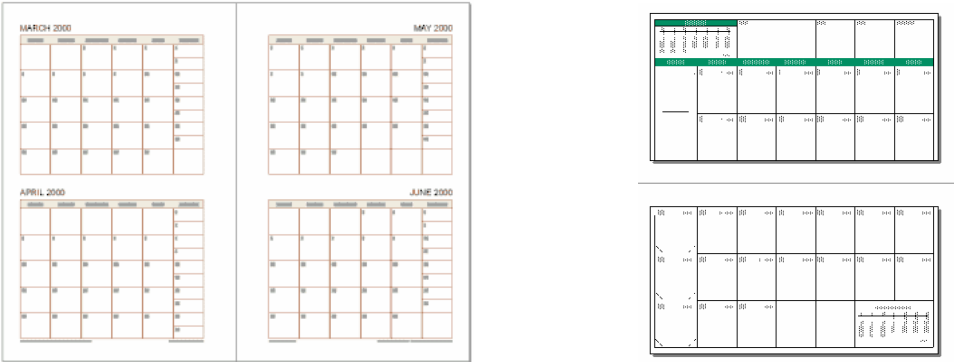
Q++ recognizes and fully supports the generation of complete diaries of the most common and also the most complex nature, whether daily diary grids (including 7 days/6 pages),



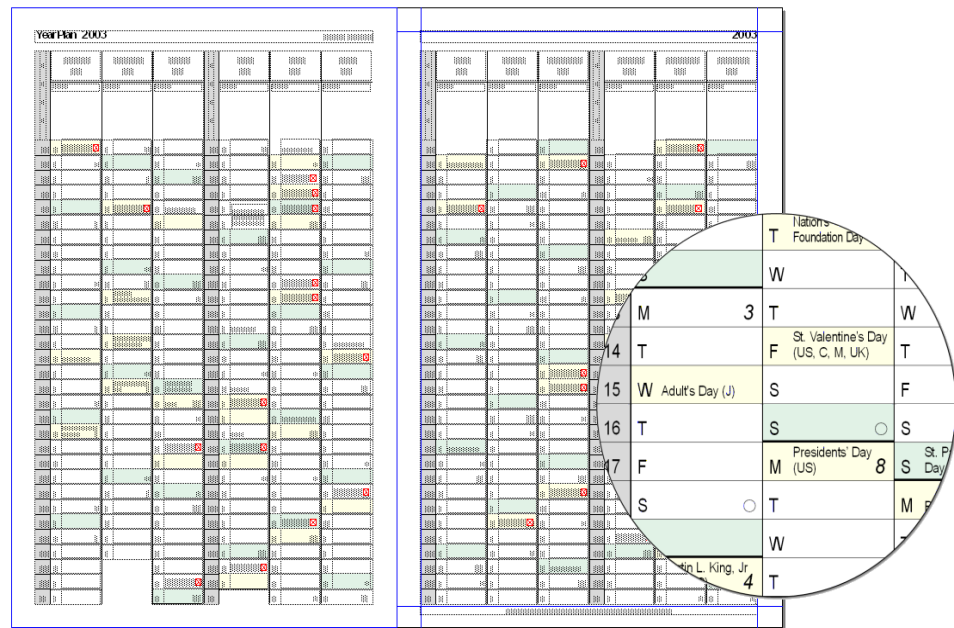
weekly diary grids (US or European style),



monthly diary grids (including multiple months views and movable moveable elements such as the minicalendars in the green grid below),



or even the most complex yearly diary grids.



The grids above come from actual diaries fully and automatically generated by Q++ at various customer sites.

**Diary Details** *(the Devil is in the details)*

The ability, as seen above, of Q++ to handle the date flow of all types of diary grids, naturally, including odd, monthly, multi-monthly and yearly formats already sets it apart from all other solutions in existence today.

But, the details of a grid are often the most prone to error, and the most time consuming. Q++ is fully capable of easily automating even the most specific details of your diary range.

6.1. MONDAY Harri Epiphany	7.1. TUESDAY Aukusti Aku	8.1. Hilpp
8	8	8

17	Tisdag 168 Torborg Torvald	Islands nationaldag
18	Onsdag 169 Björn Bjørne	
19	Torsdag 170 Germund Görel	
20	Fredag 171 Linda	Midsonnarefton
21	Lördag 172 Aif Alvar Midsonnarefton	Sommarsdågslandet
22	Söndag 173 Paulina Paula Den helige Johannes Döparens dag	
23	Måndag 174 Adolf Alice	26



weekdays' position, typography and graphical elements changing from month to month,



the appearance of month names and/or years based on month and year changes,



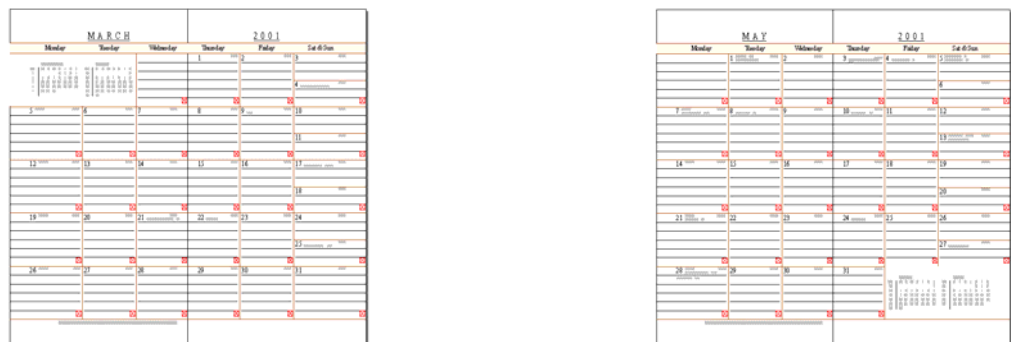
weekly or monthly tabs,



rotating images every week/month (these can also be rich-text formatted slogans such as Bible quotations or *quotes of the day*),

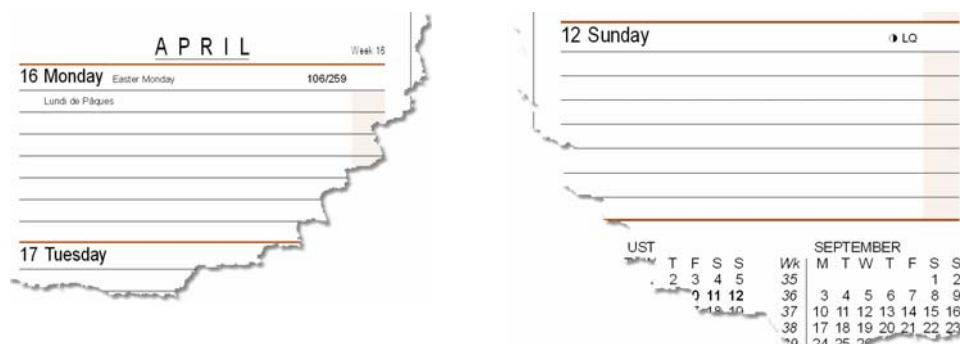


and moving graphical elements (mini-calendars in the example below) according to the structure of a month, to show only some of the possibilities of Q++.

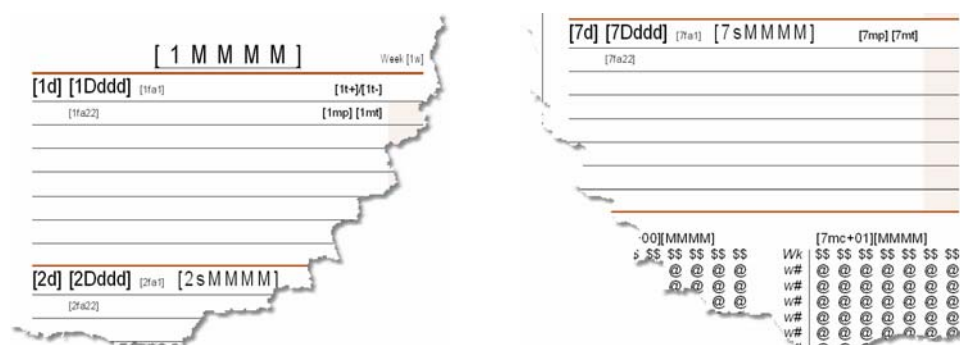


## Using Quark Layouts *(how it's done)*

The dated part of diary files generated by Q++ comes from importing a QuarkXPress file that contains the diary's layout. Creating a diary template for the first time takes about 2-3 hours using 2 pages from previous year's diaries ...



... and simply replacing the dated text by codes, which tell Q++ what information (date, month, year, holidays, moon phases) to display.



These templates are then saved by Q++ and are re-used *as is* the following years. Because the process is visual, any future changes take only minutes.

The advantage of Q++ as compared to other QuarkXPress based solutions<sup>1</sup>, is that all the elements of the diary template are visible in true WYSIWYG fashion, eliminating any guesswork. Furthermore all elements of the diary template are independent of one another, which means that one cannot "break" a diary template by modifying it, and the data used (languages, holidays, ...) is totally independent of the grids used<sup>2</sup>.

## Generating Diary Output Files

To generate a diary file in Q++, one creates a script, which tells Q++ which diary grids (p.6) and which data (p.11) to use, and the options to apply to them (p.7). The creation and modification of scripts is done in the Q++ main window.

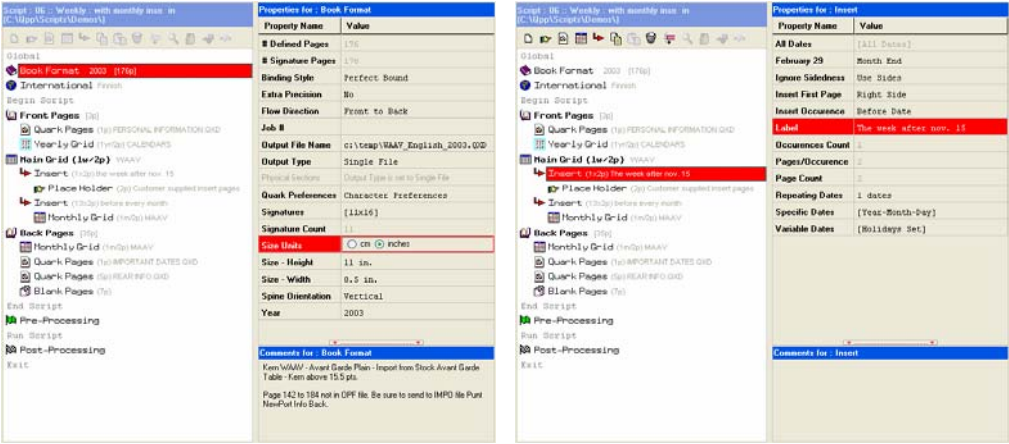
Depending on the complexity of the diary (p.6) and the hardware used (p. On each User Workstation), generating a full year diary takes from 30 seconds to one minute. The final

<sup>1</sup> Other QuarkXPress based solutions require the use of linked textboxes, which makes it difficult to modify a template once it has been set up, and forces the generation of a diary to be split into blocks of a few weeks only, meaning that the generation of a full year diary involves the creation of 5-10 different files. These solutions also often import information from external file using X-tags, which means that the dated part of the template (presumably the most important) is not visible within the template, and that any change in the number of dated elements requires changes in the text file being imported, effectively requiring a specific formatting of data for each different diary template.

<sup>2</sup> Q++ monitors text overflow and takes the user to each occurrence of text overflow in a generated diary, so the user can correct it.

output can be a single QuarkXPress file, or one file per section/signature (p.21), or Q++ can automatically convert the output to EPS format.

Scripts are made up of script lines. In a manner similar to the use of a Lego set, the user adds script lines of various types (diary grids, blank pages, information pages, customer artwork, ...) and arranges them in the order they should appear in the output file.



The properties of a script line are displayed and edited by selecting the script line. For example, selecting a diary script line would let the user select the start/end dates for the diary, which diary grid to use, and the options that Q++ should apply to that diary grid.

One should note that a script is much more than a diary grid repeated over 52 weeks. First of all the start/end dates are fully modifiable, and a script can include multiple diary grids. But, most importantly, a script represent the entirety of a diary, from the very first page (which could be a glued-on blank page) to the very last page, including diary grids, information pages, customer supplied artwork, etc ...

Scripts are an excellent tool to manage all the business rules governing your range of products, as well as the exceptions to these rules. The need for post-its and reminders on work folders disappears. No need to rely on someone's memory to remember that one specific diary starts on the week of December 15<sup>th</sup>, although all your other diaries start on the week of January 1<sup>st</sup>.

The rules for all diaries are kept in Q++, and each year, updating a diary usually only means changing the year of the diary and re-generating a diary which obeys all the specified rules, including those of moveable holidays (p.13).

## Customizing Diaries

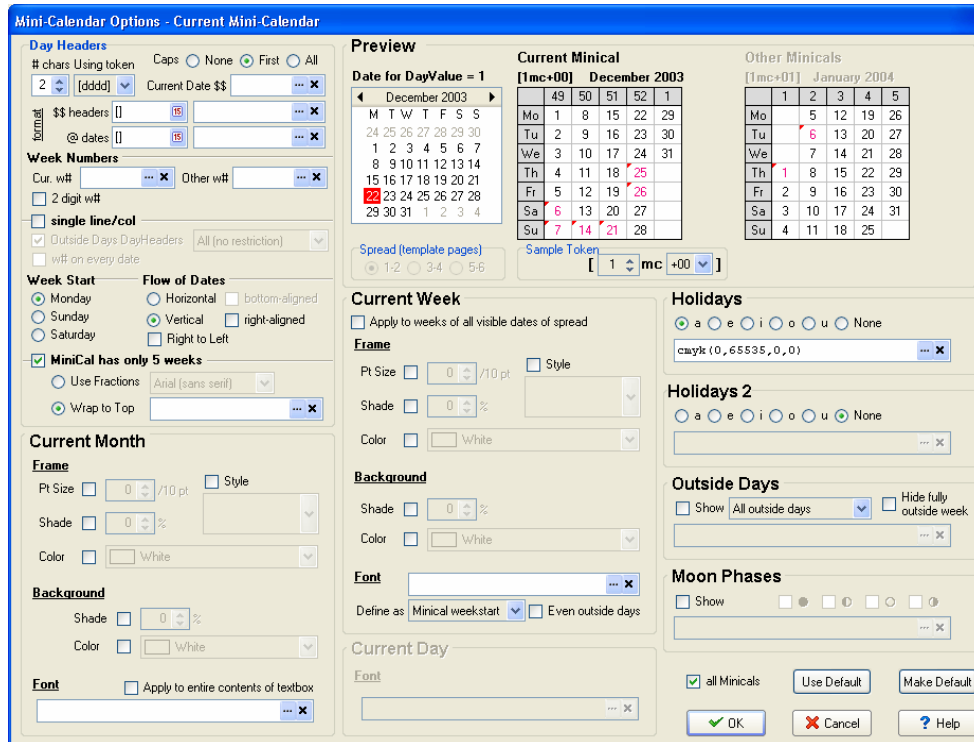
Current users of Q++, located on 4 continents and in 23 countries, are able to generate all their diaries automatically, and presentations of Q++ to other diary editors have not yet revealed any diary that Q++ cannot automate.

The existence of a macro language (p.10) and the user driven updates philosophy of Q++ (p.29), ensures that any new user will have all its needs promptly covered.

The list of customization options in Q++ would be too long to cover here, but we will briefly cover 3 of these options.

## Mini-Calendars

Q++ allows the user to fully preview and customize mini-calendars.



Mini-calendars can be horizontal, vertical, start on Sunday or have only 5 weeks:

TAMMIKU	January	JANUARY	APRIL
Wk M T K T P L S	Week 1 2 3 4 5	Wk S M T W T F S	Wk M T W T F S S
1 1 2 3 4 5 6 7	Mon 7 14 21 28	1 1 2 3 4 5 6	13 1 2 3 4 5 6 7 8
2 8 9 10 11 12 13 14	Tue 1 8 15 22 29	2 7 8 9 10 11 12 13	14 2 3 4 5 6 7 8
3 15 16 17 18 19 20 21	Wed 2 9 16 23 30	3 14 15 16 17 18 19 20	15 9 10 11 12 13 14 15
4 22 23 24 25 26 27 28	Thu 3 10 17 24 31	4 21 22 23 24 25 26 27	16 16 17 18 19 20 21 22
5 29 30 31	Fri 4 11 18 25	5 28 29 30 31	17 23 24 25 26 27 28 29
	Sat 5 12 19 26		
	Sun 6 13 20 27		

Font attributes can vary for the current day, spread, week or month :

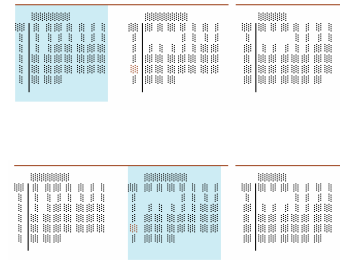
APRIL	APRIL	APRIL	APRIL
Wk M D M D F S S	Wk M D M D F S S	Wk M D M D F S S	Wk M D M D F S S
13 1 2 3 4 5 6 7	13 1 2 3 4 5 6 7	13 1 2 3 4 5 6 7	13 1 2 3 4 5 6 7
14 2 3 4 5 6 7 8	14 2 3 4 5 6 7 8	14 2 3 4 5 6 7 8	14 2 3 4 5 6 7 8
15 9 10 11 12 13 14 15	15 9 10 11 12 13 14 15	15 9 10 11 12 13 14 15	15 9 10 11 12 13 14 15
16 16 17 18 19 20 21 22	16 16 17 18 19 20 21 22	16 16 17 18 19 20 21 22	16 16 17 18 19 20 21 22
17 23 24 25 26 27 28 29	17 23 24 25 26 27 28 29	17 23 24 25 26 27 28 29	17 23 24 25 26 27 28 29
18 30	18 30	18 30	18 30

Dates attributes can reflect the occurrence of a holiday, moon phase, or dates outside the month. Of course it is possible to have right-to-left dates flow for Hebrew and Muslim diaries.

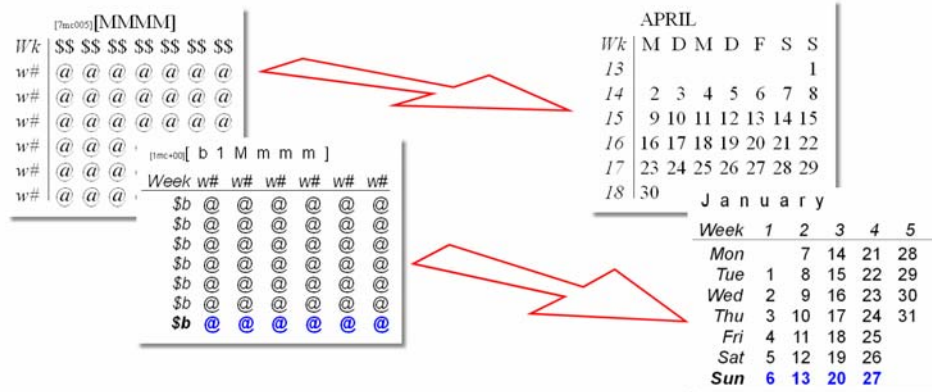
JANUARY	january	APRIL	August 2003
Wk M T W T F S S	M T W T F S S	Wk M T W T F S S	Sat 30 31 1 2 3
1 1 2 3 4 5 6 7	1 1 2 3 4 5	13 1 2 3 4 5 6 7	Sun 31 32 1 2 3 4
2 8 9 10 11 12 13 14	6 7 8 9 10 11 12	14 2 3 4 5 6 7 8	Mon 30 31 1 2 3
3 15 16 17 18 19 20 21	13 14 15 16 17 18 19	15 9 10 11 12 13 14	Tue 31 32 1 2 3
4 22 23 24 25 26 27 28	20 21 22 23 24 25 26	16 16 17 18 19 20 21 22	Wed 31 32 1 2 3
5 29 30 31	27 28 29 30 31	17 23 24 25 26 27 28 29	Thu 31 32 1 2 3
		18 30	Fri 31 32 1 2 3

Finally, graphical attributes, such as frame and background shading can be used to highlight the current week or month:

	(12) DECEMBER 2000						
wk	M	T	W	T	F	S	S
48					1	2	3
49	4	5	6	7	8	9	10
50	11	12	13	14	15	16	17
51	18	19	20	21	22	23	24
52	25	26	27	28	29	30	31



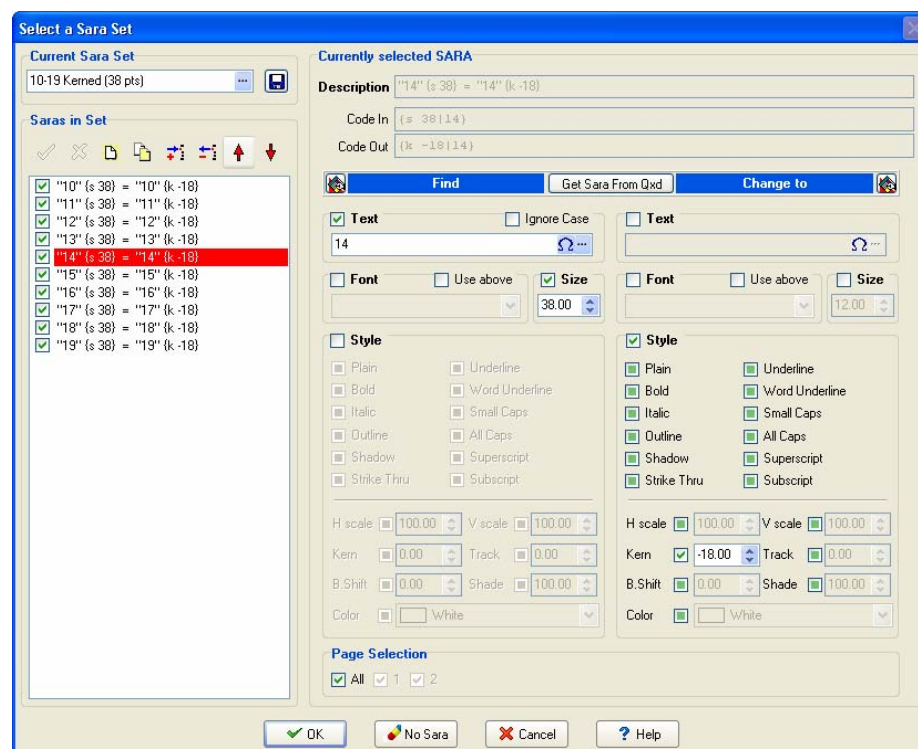
Note that the samples above do not come from a limited, pre-set, list of mini-calendars. These mini-calendars and their font attributes were typeset freely in QuarkXPress.



What Q++ did was to replace the codes by the dates and *modify* the font attributes as required.

## SARAs

SARAs (*Search And Replace Algorithm*) allow the user to include, in scripts, any search/replace operation allowed by QuarkXPress, including typographically defined ones. Saras allow you to automate the final manual touch-ups that are often necessary in a diary.



The power and flexibility of SARAs comes from:

- They are saved in scripts along with the other business rules, and can therefore be reused the following years.
- Each SARA can be defined to apply to all pages of a diary or only to certain pages.

SARAs are essential whenever a customization is based on typographical elements rather than structural or date-related elements.

For example, in Geiger's *Preference* collection, the letter "O" replaces zeros used in the years at the top of each page, to obtain a plusher effect. Trying to program this as part of the standard options would be hard to maintain, mostly since, in the present case the replacement of 0 by O should only occur for size 18 font size elements.

JULI 2001	JULI 2001
1 SÖN	1 SÖN
2 Mån	2 Mån
3 Tis	3 Tis

Using SARAs this type of customization is easily included in a script and can then be reused year after year.

SARAs are also used to abbreviate the name of a holiday, which does not fit the space allotted to it in a *particular* diary grid. Rather than making up a special holidays list for that diary grid, it makes more sense to include the abbreviation as part of the script that uses the diary grid.

## Macro Language

The Q++ macro language is ideal for the complex or very specific customization needs. Anyone who has used the macro language of Word or Excel, will appreciate the power that comes from a macro language integrated with its host application.

The C++ macro language is a powerful, strongly typed language with branching (if / case / switch), looping (for / while), ranges, and static variables

Integrated help file covers all aspects of the macro language, functions, internal variables, and compiler messages

Syntax highlighting immediately shows macro structure

Macros can use all the functions and variables used by C++ internally

C++ macros are compiled into fast, robust and reusable code

The macro compiler issues hints and warnings to alert you to code which compiles correctly but may be flawed

```

b_IsRunTime
b_VOID
b_RESULT
n_GridPage
n_GridWeekStart
n_OutputPage
n_ScriptYear
n_TokenDate
n_TokenDayValue
n_TokenLangID
    
```

```

#include <MACRO 3
// for the month before minimal
global
nDateOfBox nCurPage nTargetMonth
input
sMonthOffset
var
bIsHoliday bChangeOfPage bIsInsideMonth
begin
  if not bIsInitialized(nCurPage)
    nCurPage = 0
  endif
  bChangeOfPage = (n_OutputPage <> nCurPage)
  nCurPage = nCurPage
  if bIsInitialized(nDateOfBox) and (not bChangeOfPage)
    inc(nDateOfBox)
  else
    nTargetMonth = MonthOf(MoveMonths(n_TokenDate, nMonthOffset))
    nDateOfBox = WeekStartOf(MoveMonths(n_TokenDate, nMonthOffset), 1)
  endif
  // check if the date is inside the month
  bIsInsideMonth = (MonthOf(nDateOfBox) == nTargetMonth)
  // Check if there is a holiday
  bIsHoliday = HolidayOf(nDateOfBox, '1', nDateOfBox)
  if bIsHoliday and bIsInsideMonth
    bRESULT = false
    sRESULT = "1*3" + IntToStr(DayOf(nDateOfBox)) + "1"
  else
    bRESULT = true
    sRESULT = ""
  endif
end
    
```

int = DayDescending(nAnyDate)

This macro function takes a date as parameter and returns the number of days until the end of the year. This is the function used internally by C++ to evaluate the `Li` token.

nDaysUntilDec31st = DayDescending(Today())

Note that the value of this function on December 31st is 0, not 1.

See also : [DaysAscending](#)

```

0002 CALL nTargetMonth
0010 IFP nMonth=0 then false
0012 IFP nMonth=0 then false
0014 IFP nMonth=0 then false
0016 IFP nMonth=0 then false
0018 IFP nMonth=0 then false
0020 IFP nMonth=0 then false
0022 IFP nMonth=0 then false
0024 IFP nMonth=0 then false
0026 IFP nMonth=0 then false
0028 IFP nMonth=0 then false
0030 IFP nMonth=0 then false
0032 IFP nMonth=0 then false
0034 IFP nMonth=0 then false
0036 IFP nMonth=0 then false
0038 IFP nMonth=0 then false
0040 IFP nMonth=0 then false
0042 IFP nMonth=0 then false
0044 IFP nMonth=0 then false
0046 IFP nMonth=0 then false
0048 IFP nMonth=0 then false
0050 IFP nMonth=0 then false
0052 IFP nMonth=0 then false
0054 IFP nMonth=0 then false
0056 IFP nMonth=0 then false
0058 IFP nMonth=0 then false
0060 IFP nMonth=0 then false
0062 IFP nMonth=0 then false
0064 IFP nMonth=0 then false
0066 IFP nMonth=0 then false
0068 IFP nMonth=0 then false
0070 IFP nMonth=0 then false
0072 IFP nMonth=0 then false
0074 IFP nMonth=0 then false
0076 IFP nMonth=0 then false
0078 IFP nMonth=0 then false
0080 IFP nMonth=0 then false
0082 IFP nMonth=0 then false
0084 IFP nMonth=0 then false
0086 IFP nMonth=0 then false
0088 IFP nMonth=0 then false
0090 IFP nMonth=0 then false
0092 IFP nMonth=0 then false
0094 IFP nMonth=0 then false
0096 IFP nMonth=0 then false
0098 IFP nMonth=0 then false
0100 IFP nMonth=0 then false
    
```

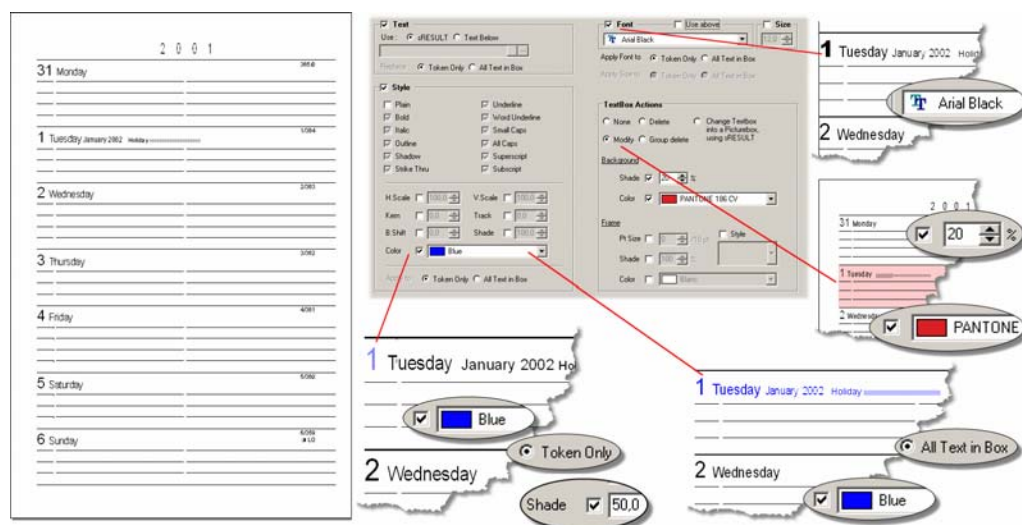
Compilation successful [2 warnings, 2 hints]

Level	Line	Message
warning	014	"bIsInsideMonth": Variable is not initialized
warning	029	"bIsHoliday": Variable might not have been initialized
hint	011	"bIsInsideMonth": Variable is declared but never used
hint	041	"nTargetMonth": Value assigned to variable is never used

Compiler Messages Watches



The Q++ macro language is powerful; from within macros, one can call all the functions used internally by Q++, and one can trigger all the actions that Q++ is capable of (text replacement, typographical changes, shading, framing, deleting textboxes, ...).



Because Q++ macros are compiled, their validation is performed when written (possibly by someone else), they can then be easily selected and re-used in a user-friendly context that is within the reach of all users.

The Q++ macro code editor and macro debugger have all the features of professional languages (syntax highlighting, integrated help, integrated compiler, two-way links between messages and errors and their origin in the source code, conditional breakpoints, fly-by variable evaluation, ...).

In practice, most macros are written for users by technical support (p.28), since writing macros is rather complex. However the existence of macros and their ability to access Q++ internals is a long-term guarantee of an investment made in Q++.

## Diary-Related Data

All diary-related data used in Q++, can be edited and managed from within Q++.

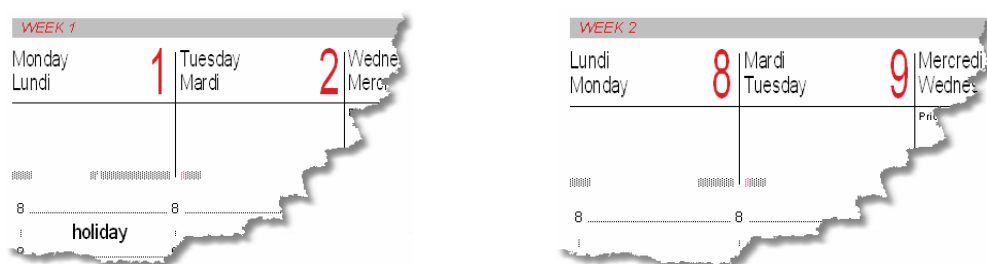
### Languages and Translations

Multilingual diaries are easy to generate in Q++, as their coding is done exactly the same way as single-language diaries. Selecting or changing a script's language(s) is a matter of seconds.

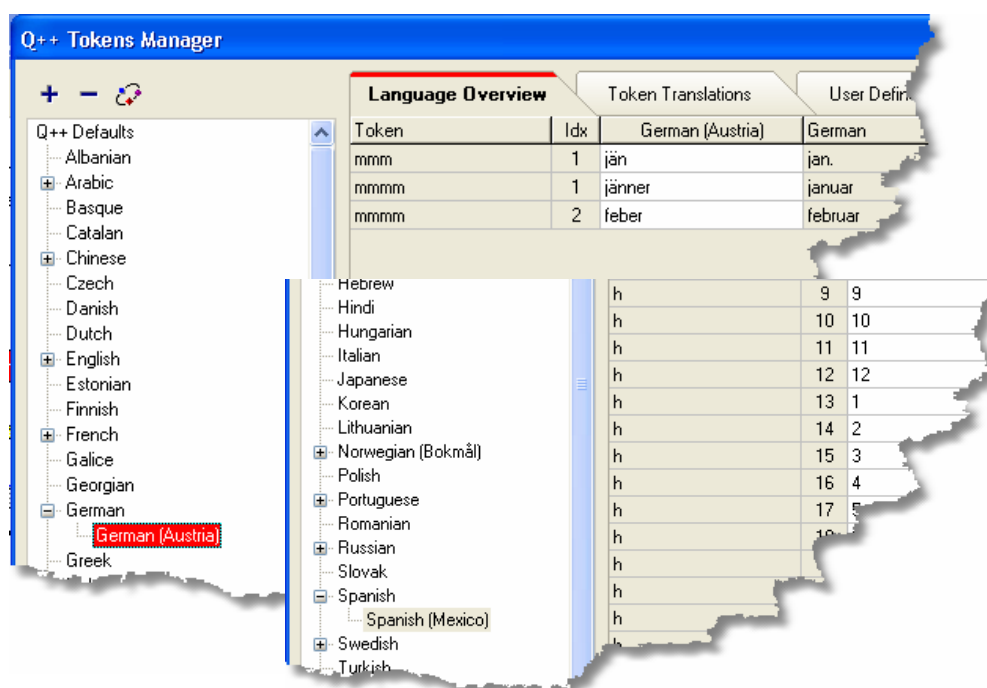


One can even alternate the appearance of languages, to avoid having one language appear

always before the other. This is useful for multilingual countries with strong linguistic communities such as Belgium, Canada, Finland, Spain and Switzerland.



In Q++, languages are organized hierarchically. For example Austrians speak German, with some minor differences with respect to the German spoken in Germany (in particular the words used for January and February). The Q++ database treats Austrian German as a subset of German, which lets the user only specify the differences between the 2 languages, as shown below.



The use of this hierarchy is not limited to purely linguistic differences; it can also be very useful in cases such as:

- Languages used in Europe (where hours are counted from 0-24) and the Americas (where the hours of the day run from 1-12 am/pm). Q++ allows you to share the same grid and language for both markets, with very little effort (see example above).
- Specific terminology requested by a market or client. For example a customer might wish to have the word "priority" replaced by "important" in a special diary. Creating a sub-language with only this difference from the original language is an easy way to avoid modifying the diary template and to make sure the change is saved for future use.

The Q++ language hierarchy promotes reuse, helps users avoid re-copying errors, and ensures that any modification to a parent language is immediately implemented in all related languages. Note that Q++ handles languages such as Greek, Polish or Russian, like any other language, and provides data entry tools for users who do not have the proper keyboard. Q++



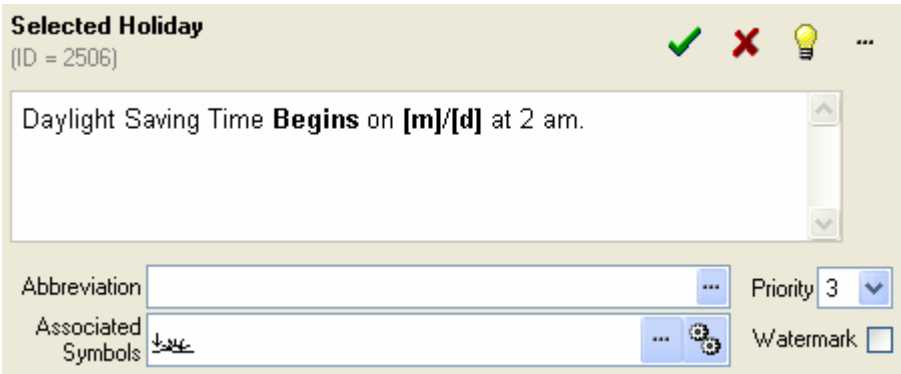
currently contains translations of diary-related words for over 50 languages<sup>3</sup>. Users can easily add languages or modify the existing translations.

Non-Western Calendars

Dates corresponding to the major non-Western calendars (Hebrew, Muslim, Chinese, Coptic, Ba'hai and Hindu) can also be displayed instead of, or alongside the traditional Western Gregorian dates (see Arabic and Chinese examples on page **Error! Bookmark not defined.**).

Holidays and Notable Dates

Management of holidays occurrences and how they are displayed is a key element of most diaries, hence of Q++. The Holidays Manager lets users create holidays, defining for each holiday a name and other textual and graphical elements which relate to that holiday.



As shown above:

- Holiday names can contain additional typographical attributes.
- Holiday names can include codes, making the holiday names dynamic. In the above example, each year, the name will be modified by the [dd] [mmm] codes to reflect the actual date when this holiday does occur (start of summer time in this case).
- It is also possible to display a graphic, instead of text on a given holiday's occurrence.

The combination of these elements with the many display options of Q++ allows for all the range of holidays presentations encountered in diaries to date. Some examples:



A key aspect of the way holidays are managed is that holidays are saved along with the rule for calculating their occurrences, and Q++ generates the actual holidays automatically.

<sup>3</sup> Afrikaans, Albanian, Arabic, Azeri, Basque, Bulgarian, Catalan, Chinese (Simplified), Chinese (Traditional), Croatian, Czech, Danish, Dutch, Estonian, Filipino, Finnish, French, Gaelic, Galician, Gascon, Georgian, German, German (Austria), Greek, Gujarati, Hindi, Hungarian, Indonesian, Italian, Japanese, Korean, Languedoc, Latvian, Limousin, Lithuanian, Luxembourgish, Malay, Ndebele, North Sotho, Norwegian (Bokmål), Norwegian (Nynorsk), Polish, Portuguese, Provencal, Romanian, Russian, Sesotho, Setswana, Sinhala, Slovenian, Slovak, Spanish, Swazi, Swedish, Tamil, Tshivenda, Tsonga, Turkish, Ukrainian, Vietnamese, Welsh, Xhosa, and Zulu.

Q++ is pre-installed with a database with the rules for the official public holidays for all the countries of the world and additional rules can be added easily using an intuitive interface which divides holiday rules into different types.

**Fixed date holidays:** these holidays are *based* on a fixed date (such as *New Year's Day* below left), but can also be moveable if they are based on a weekday preceding/following a fixed date (such as *Buß- und Bettag* below right)..

**Recurrence Rule**  
Rule Type: **Fixed** Validity: **Always**  
Exceptions:  (overrides all other options)

Every year on the **day of** **January** **1** ☐ Orthodox

Special Cases  
☒ Saturdays are moved to **the following** **Monday**  
☒ Sundays are moved to **the following** **Monday**  
☐ Mondays

Add **0** days Holiday lasts **1** days

Sample Dates (calculated before conflict checking)  
1-Jan-2002 1-Jan-2003 1-Jan-2004 3-Jan-2005 2-Jan-2006

**Recurrence Rule**  
Rule Type: **Fixed** Validity: **Always**  
Exceptions:  (overrides all other options)

Every year on the **1** st **Wednesday** **after** **November** **15** ☐ Orthodox

Special Cases  
☐ Saturdays  
☐ Sundays  
☐ Mondays

Add **0** days Holiday lasts **1** days

Sample Dates (calculated before conflict checking)  
20-Nov-2002 19-Nov-2003 17-Nov-2004 16-Nov-2005 22-Nov-2006

**Variable date holidays:** these holidays are based on the  $n^{\text{th}}$  weekday of a given month. Examples below are *Victoria Day* (Canada) and *Volkstrauertag* (Germany).

**Recurrence Rule**  
Rule Type: **Variable** Validity: **Always**  
Exceptions:  (overrides all other options)

Every year, **0** days ☐ before ☒ after  
the **Second to last** **Monday** of **May**

Add **0** days Holiday lasts **1** days

Sample Dates (calculated before conflict checking)  
20-May-2002 19-May-2003 24-May-2004 23-May-2005 22-May-2006

**Recurrence Rule**  
Rule Type: **Variable** Validity: **Always**  
Exceptions:  (overrides all other options)

Every year, **5** days ☐ before ☒ after  
the **2nd** **Tuesday** of **November**

Add **0** days Holiday lasts **1** days

Sample Dates (calculated before conflict checking)  
17-Nov-2002 16-Nov-2003 14-Nov-2004 13-Nov-2005 19-Nov-2006

**Easter related holidays:** these holidays can be based on the date of Western (*Good Friday* below left) or Orthodox Easter (below right). Dates for Easter and Orthodox Easter are automatically calculated until 2400 and February 28 2200, respectively.

**Recurrence Rule**  
Rule Type: **Easter** Validity: **Always**  
Exceptions:  (overrides all other options)

Holiday falls **2** days **before** **Easter Sunday**  
☐ Use Orthodox Easter

Add **0** days Holiday lasts **1** days

Sample Dates (calculated before conflict checking)  
29-Mar-2002 18-Apr-2003 9-Apr-2004 25-Mar-2005 14-Apr-2006

**Recurrence Rule**  
Rule Type: **Easter** Validity: **Always**  
Exceptions:  (overrides all other options)

Holiday falls **0** days **before** **Easter Sunday**  
☒ Use Orthodox Easter

Add **0** days Holiday lasts **1** days

Sample Dates (calculated before conflict checking)  
5-May-2002 27-Apr-2003 11-Apr-2004 1-May-2005 23-Apr-2006

**Conflict checking:** a holiday occurrence of can be moved (or cancelled) if it occurs on the same date as another holiday. Examples below: *Mother's Day* (France) and *27<sup>th</sup> in Advent* (Anglo-Saxon Church Sundays).

**Conflict Rules**  
Do ☐ nothing ☐ delete ☒ move by **7** days  
if in conflict with ☐ any holiday ☒ this holiday **PENTECÔTE**

**Conflict Rules**  
Do ☐ nothing ☒ delete ☐ move by **0** days  
if in conflict with ☒ any holiday ☐ this holiday **PENTECÔTE**

**Jewish holidays** are automatically calculated (below: *Purim*), as are **Muslim holidays** (including multiple occurrences of a holiday in a given year; for example *Eid al F'tir* in 2000).

**Recurrence Rule**

Rule Type: **Jewish** Validity: **Always**

Exceptions: ... (overrides all other options)

Day: 10 ☒ If holiday falls on a Saturday, move it to Sunday

Month: Tishri

Add: 0 days Holiday lasts: 1 days

Sample Dates (calculated before conflict checking): 16-Sep-2002, 6-Oct-2003, 26-Sep-2004, 13-Oct-2005, 2-Oct-2006

**Recurrence Rule**

Rule Type: **Muslim** Validity: **Always**

Exceptions: ... (overrides all other options)

Holidays Set uses: Q++ Default Muslim Dates

Muslim Month: Shawwal Day: 1

Sample Dates (calculated before conflict checking): 8-Jan-2000, 16-Dec-2001, 6-Dec-2002, 25-Nov-2003, 14-Nov-2004

**Chinese holidays** are automatically calculated, whether they are based on the lunar calendar (*Chinese New Year* below left) or the solar calendar (*Ching Ming*, below right).

**Recurrence Rule**

Rule Type: **Chinese** Validity: **Always**

Exceptions: ... (overrides all other options)

☒ Lunar: Day 1 of lunar month 1

☐ Solar: The 1st minor solar term

Special Cases: ☐ Fridays, ☐ Saturdays, ☐ Sundays

Add: 0 days Holiday lasts: 1 days

Sample Dates (calculated before conflict checking): 24-Jan-2001, 12-Feb-2002, 1-Feb-2003, 22-Jan-2004, 9-Feb-2005

**Recurrence Rule**

Rule Type: **Chinese** Validity: **Always**

Exceptions: ... (overrides all other options)

☐ Lunar: Day 1 of lunar month 1

☒ Solar: The 3rd minor solar term Qingming (Pure Brightness)

Special Cases: ☐ Fridays, ☐ Saturdays, ☐ Sundays

Add: 0 days Holiday lasts: 1 days

Sample Dates (calculated before conflict checking): 5-Apr-2001, 5-Apr-2002, 5-Apr-2003, 4-Apr-2004, 5-Apr-2005

**Hindu Holidays** (solar and lunar) such as *Diwali* and *Pongal*.

**Recurrence Rule**

Rule Type: **Hindu** Validity: **Always**

Exceptions: ... (overrides all other options)

☒ Lunar: Month Kartika Day 1

☐ leap month if exists ☐ leap day

☐ Solar: Month Makara Day 1

Add: 0 days Holiday lasts: 1 days

Sample Dates (calculated before conflict checking): 16-Nov-2001, 5-Nov-2002, 26-Oct-2003, 13-Nov-2004, 2-Nov-2005

**Recurrence Rule**

Rule Type: **Hindu** Validity: **Always**

Exceptions: ... (overrides all other options)

☐ Lunar: Month Chaitra Day 1

☐ leap month if exists ☒ leap day

☒ Solar: Month Makara Day 1

Add: 0 days Holiday lasts: 1 days

Sample Dates (calculated before conflict checking): 14-Jan-2001, 14-Jan-2002, 14-Jan-2003, 14-Jan-2004, 14-Jan-2005

**Buddhist holidays** and **South-East Asian** holidays are predicted using **Lunisolar** recurrence rules (below: *Essala Poya Day* in Sri Lanka and the *Vesak* in Singapore).

**Rule Type** **Lunisolar** **Observance**

Every year on the day of 1st Full Moon

☐ cycle ☒ sidereal

in the month of July

Days begin at sunrise

Holidays Set is based on the lunar location Sri Lanka, Colombo

**Rule Type** **Lunisolar** **Observance**

Every year on the day of 1st Full Moon

☒ cycle ☐ sidereal

after the solar longitude of Taurus

Days begin at sunrise

Holidays Set is based on the lunar location Singapore, Singapore

Holidays based on the **Sikh**, **Persian** and **Bah'ai** calendars are also automatically calculated by Q++ Studio. In the case of holidays or events whose date cannot be calculated and/or which occur over many days and (such as the *Olympics*, or *trade fairs*) Q++ Studio lets you specify these dates as **Arbitrary Dates** and **Range of Dates**.

Finally, if you know one or more dates when a holiday occurred, you can use the Q++ **Holiday Rule Wizard** to let Q++ test out all the possible rules that match (see example above).



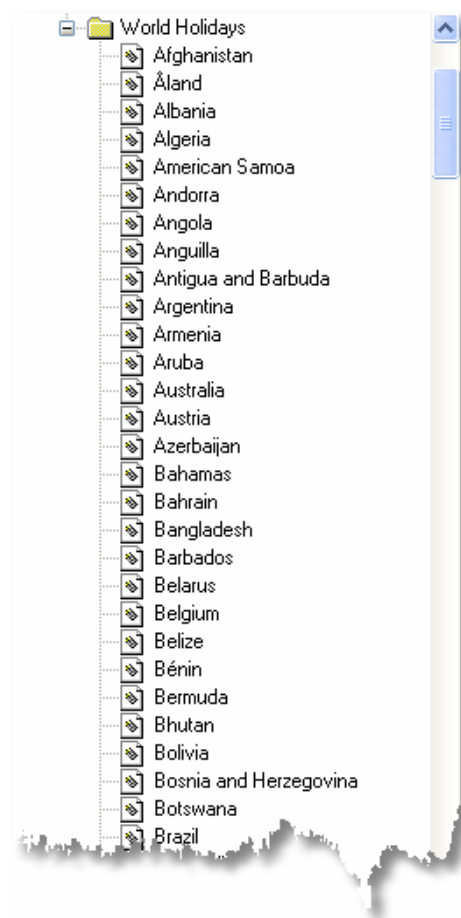
## World Holidays Database

Q++ Studio is installed with a World Holidays sample database which includes public, legal and bank holidays in over 230 countries and territories of the world.

This database is made up of rules (such as: *Good Friday=2 days before Easter*) so you can use Q++ and the current database to calculate world holidays for as many years in the future as desired.

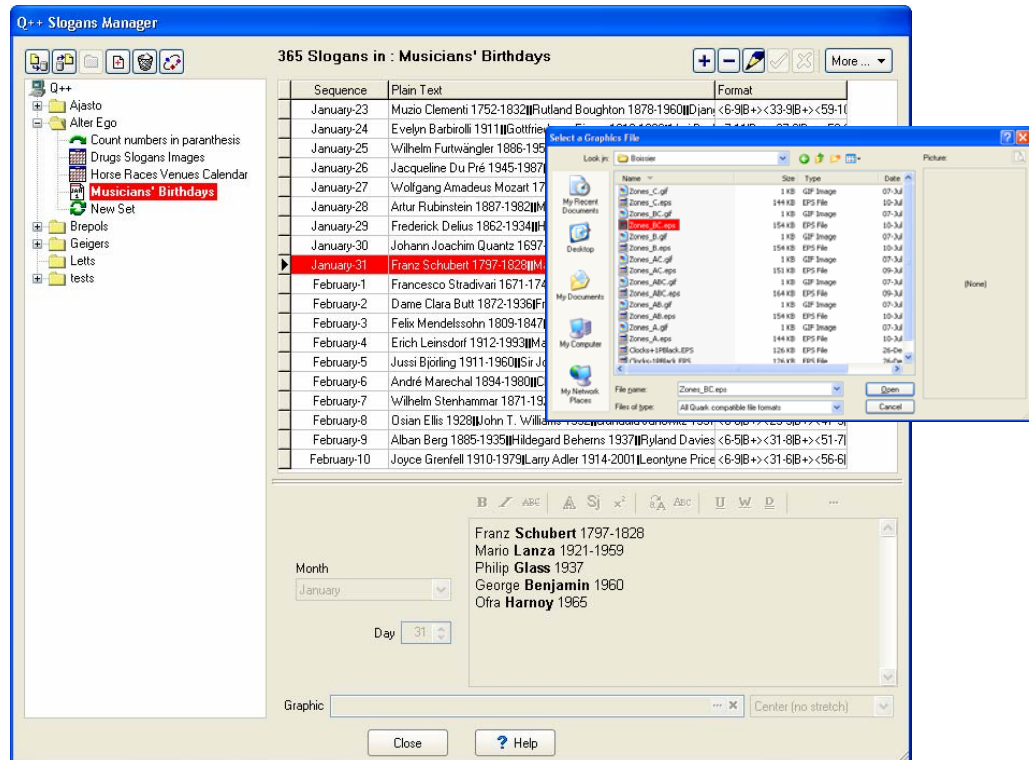
Since the rules that determine the dates of holidays change (some holidays are added, some are removed, some are renamed), the rules of this database are completely reviewed every summer and a new updated version of this database is available, at the end of the summer, as part of the maintenance agreement. Minor patches are also released during the year.

Q++ Studio users are free to use these holidays "as is", or Q++ Studio also provides all the tools needed to modify and expand this list (changing the names of some holidays, adding or removing some of the holidays, adding new countries, ...).



## Customer Slogans/Images and Quotes of the Day

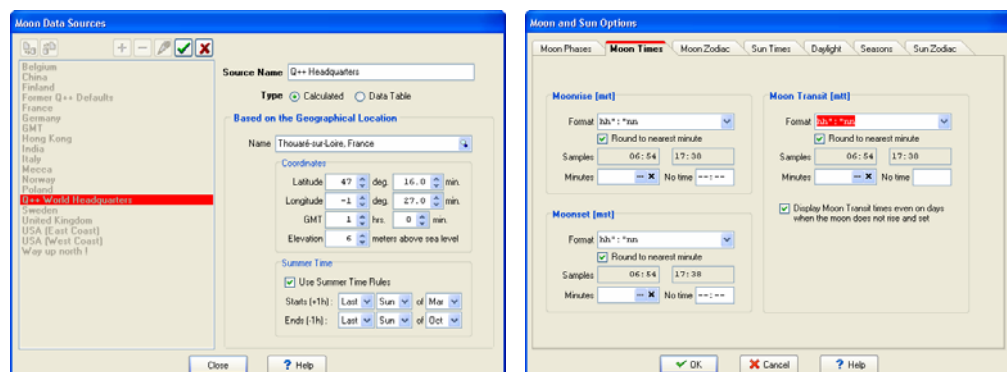
Q++ makes it easy to display Quotes of the day and customer supplied slogans and/or images to be repeated. The frequency of the appearance of these slogans is customizable, and all QuarkXPress compatible graphics file formats are supported.



A special importation module makes it easy to import these customer-supplied data from an Excel sheet.

## Moon Data

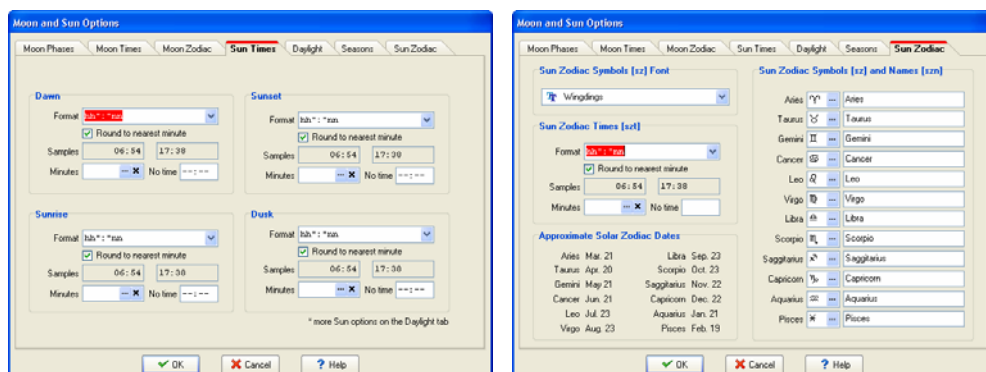
Q++ automatically calculates dates and times for all the Moon events, such as Moon phases (including the time of their occurrence), moonrise, moonset, Moon transit and the passage of the Moon through the 12 Zodiac signs (Western and Hindu).



You can keep multiple source locations in your database and, with a few clicks, you can regenerate a diary with Moon data based on a different geographical location and time zone.

## Sun Data

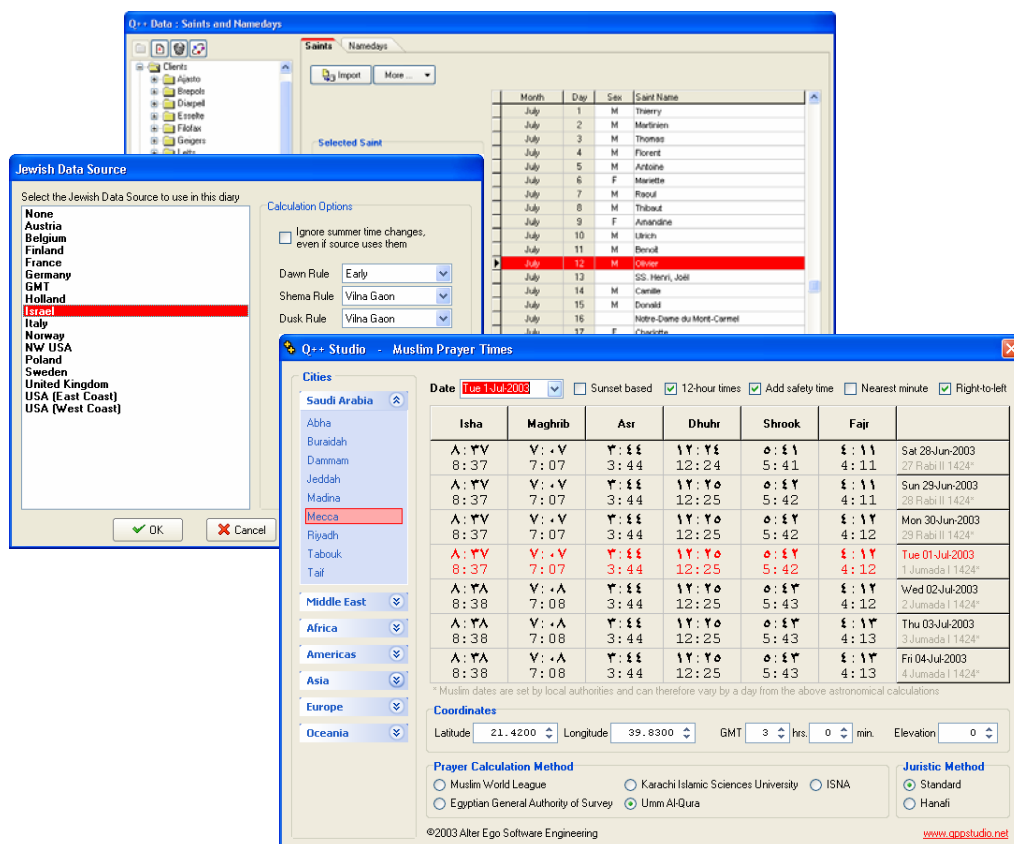
Q++ automatically calculates dates and times for all the Sun events, such as sunrise, sunset, dawn, dusk, solstices, length of daylight, equinoxes, seasons and the starting date and times of the 12 Zodiac signs (Western and Hindu).



You can keep multiple source locations in your database and, with a few clicks; you can regenerate a diary with Sun data based on a different geographical location and time zone. You can even base Sun calculations of many different locations within the same diary (see the topic Information Pages, below).

## Religious Data

Q++ can calculate and display religious data such as Christian Saints and Namedays, Jewish times (Candle Lighting, Shabbat's End) and Muslim Prayer Times.



Time calculations are based on close contacts with specialists in Israel and Saudi Arabia, and allow for the use of all known variations in the calculation of the dawn and dusk prayers as well as corrections for locations situated above 48 degrees of latitude.

## Information Pages

Q++ can do much more than generate date-block pages. It can also automatically generate any information page at the front or back of a diary whose data is date dependent. Below are some current samples of holidays information pages automatically generated with Q++ Studio.

INTERNATIONAL HOLIDAYS 2004					
TERRITORY	JAN	FEB	MAR	APR	MAY
Argentina	1,6	23,24		8,9	1,25
Australia	1,26			9,10,12,25	
Austria	1,6			12	1,20,31
Belgium	1			12	1,20,31
Brazil	1	23,24,25		8,9,10,21	1
Canada	1			9,12	24,31
China	1,22		8	4	1
Denmark	1			8,9,12	7,20,31
Finland	1,6			8,9,12,30	1,19,20,31

INTERNATIONAL HOLIDAYS					
<b>Argentina</b> 1 Jan New Year's Day 5 April National Day 9 April Good Friday 11 April Easter 1 May Labour Day 21 June Flag Day 21 June Veterans' Day 9 July Independence Day 16 Aug Death of General Jose de San Martin 11 Oct Columbus Day 8 Dec Immaculate Conception 25 Dec Christmas Day 31 Dec New Year's Eve  <b>Canada</b> 1 Jan New Year's Day 19 April Good Friday					
Victory Day) 20 May Ascension Day 30 May Whit Sunday (Pentecost) 31 May Whit Monday 14 July National Day 15 Aug Assumption of the Blessed Virgin Mary 1 Nov All Saints' Day 11 Nov Armistice Day 25 Dec Christmas Day  <b>Germany</b> 1 Jan New Year's Day 9 April Good Friday 12 April Easter Monday 1 May Labour Day 20 May Ascension Day 31 May Whit Monday					
11 Feb National Foundation Day 20 Mar Vernal Equinox 29 April Greenery Day 3 May Constitution Memorial Day 4 May Holiday for a Nation 5 May Children's Day 20 July Marine Day 15 Sept Respect for the Aged Day 23 Sept Autumnal Equinox 11 Oct Health and Sports Day 3 Nov National Culture Day 23 Nov Labor Thanksgiving Day 23 Dec Emperor's Birthday 31 Dec Bank Holiday  <b>South Korea</b> 1 Jan New Year's Day 31 Jan Lunar New Year (3 days)					

		austria	bahrain	belgium	canada	denmark	france	germany	great britain	greece	italy	japan	netherlands	ruissia	spain	saudi arabia	south africa	south korea	switzerland	taiwan	u.s.a.
January	1 New Year's Day	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o
Gennaio	1 Foundation Days																				
	2 Bank Holiday																				
	2 New Year's Day																				
	2 Berchtold's Day																				
	2 Foundation Days																				
	6 Epiphany	o						o		o	o				o						
	11 Eid al Adha		o																		
	15 Adult's Day																				
	16 M. Luther King Day																				
	29 Chinese New Year																				
	31 Islamic New Year			o																	
February	2 Groundhog Day																				
Febbraio	9 Ashura		o																		
	11 Foundation Day											o									
	12 Lincoln's Birthday																				
	14 Valentine's Day																				
	20 President's Day																				
March	1 Independence Day																				
Marzo	6 Shrove Monday (Orth.)																				
	8 Women's Day																				
	10 Labor Day																				

The layout generated can match your specificities, and yet be totally automated for the years to come.



Tables of Sun and Moon data such as the one shown below are also extremely easy to setup in Q++ and are fully automated in the following years.

10 NORSK ALMANAKK 2004									
JANUAR					SOL				
	Kr.sand	Oslo	Bergen	Tr.heim	Tromsø	Nordkapp			
	opp	ned	opp	ned	opp	ned	opp	ned	
1 T	9 15	15 48	9 19	15 22	9 45	15 39	10 00	14 44	Under horisont
2 F	9 14	15 49	9 18	15 24	9 44	15 41	9 59	14 46	—
3 L	9 14	15 51	9 18	15 25	9 44	15 42	9 58	14 48	—
4 S	9 13	15 52	9 17	15 27	9 43	15 44	9 57	14 50	—
5 M	9 13	15 54	9 16	15 28	9 42	15 46	9 56	14 52	—
6 T	9 12	15 55	9 16	15 30	9 41	15 47	9 54	14 54	—
7 O	9 11	15 57	9 15	15 32	9 41	15 49	9 53	14 56	—
8 T	9 11	15 59	9 14	15 34	9 39	15 51	9 51	14 59	—
9 F	9 10	16 00	9 13	15 36	9 38	15 53	9 50	15 01	—
10 L	9 09	16 02	9 12	15 38	9 37	15 55	9 48	15 04	—
11 S	9 08	16 04	9 10	15 40	9 36	15 57	9 46	15 06	—

11 NORSK ALMANAKK 2004									
MÅNE					JANUAR				
	Kr.sand	Oslo	Bergen	Tr.heim	Tromsø	Nordkapp			
	opp	ned	opp	ned	opp	ned	opp	ned	
1 T	12 38	2 38	12 21	2 28	12 41	2 52	12 09	2 41	11 01
2 F	12 44	3 55	12 24	3 51	12 43	4 17	12 04	4 12	10 31
3 L	12 52	5 16	12 29	5 16	12 47	5 43	11 59	5 48	9 32
4 S	13 05	6 38	12 37	6 43	12 54	7 11	11 52	7 29	Over horisont
5 M	13 26	7 57	12 53	8 08	13 08	8 37	11 42	9 20	—
6 T	14 02	9 07	13 24	9 22	13 38	9 53	Over horisont	—	—
7 O	14 57	10 00	14 20	10 15	14 34	10 46	—	—	—
8 T	16 11	10 34	15 39	10 45	15 55	11 13	14 33	11 53	—
9 F	17 36	10 55	17 09	11 00	17 27	11 27	16 28	11 44	—
10 L	19 04	11 08	18 42	11 08	19 01	11 33	18 16	11 38	16 07
11 S	20 32	11 16	20 14	11 13	20 35	11 32	19 59	11 32	18 36

Similar tables can be generated for Christian Saints, Jewish Times and Muslim Prayer Times.

## Data Export and Import

All the data contained in Q++ Studio can be exported to MS-Excel files; this allows co-workers in other departments (editorial, proofreading ...) to have access to it.

Below are examples of holidays ...

Date	Holiday Name	Symb.	Set	Holiday Rule
Wed 01-Jan-2003	元旦		China Holidays (Chi)	January 1
Wed 01-Jan-2003	New Year's Day	Bank Holiday, UK	Filofax	January 1
Wed 01-Jan-2003	신정		Korea National Holidays	January 1
Thu 02-Jan-2003	Bank Holiday, Scotland	☞☞☞☞☞☞	Filofax	1 days (Mon-Sun) after the rule : January 1 (Sat. n
Mon 06-Jan-2003	Epiphany		Filofax	January 6
Mon 20-Jan-2003	Martin Luther King Day, USA		Filofax	The 3rd Monday of January
Sun 26-Jan-2003	Australia Day	☞☞☞	Filofax	January 26
Fri 31-Jan-2003	설날연휴		Korea National Holidays	1 days (Mon-Sun) before the rule : CHINESE : Day
Sat 01-Feb-2003	農曆年初一		China Holidays (Chi)	CHINESE : Day 1 of Month 1 (Lunar Calendar)
Sat 01-Feb-2003	설날, 음 1.1		Korea National Holidays	CHINESE : Day 1 of Month 1 (Lunar Calendar)
Sun 02-Feb-2003	農曆年初二		China Holidays (Chi)	CHINESE : Day 2 of Month 1 (Lunar Calendar)
Sun 02-Feb-2003	설날연휴		Korea National Holidays	CHINESE : Day 2 of Month 1 (Lunar Calendar)
Mon 03-Feb-2003	農曆年初三		China Holidays (Chi)	CHINESE : Day 3 of Month 1 (Lunar Calendar)
Wed 12-Feb-2003	Lincoln's Birthday, USA		Filofax	February 12
Fri 14-Feb-2003	St. Valentine's Day		Filofax	February 14
Mon 17-Feb-2003	Washington's Birthday, USA		Filofax	The 3rd Monday of February
Sat 01-Mar-2003	St. David's Day		Filofax	March 1
Sat 01-Mar-2003	삼일절		Korea National Holidays	March 1
Tue 04-Mar-2003	Islamic New Year	☞☞☞☞☞☞	Filofax	MUSLIM : Muharram 1
Tue 04-Mar-2003	Shrove Tuesday	☞☞	Filofax	47 days before Easter
Wed 05-Mar-2003	Ash Wednesday	☞☞	Filofax	46 days before Easter

... and languages and translations, exported to Excel.

Token	IDX	English	Albanian	Arabic	Basque	Catalan	Chinese	Czech	Danish	Dutch	Finnish	French	Galice	Georgian	German	Greek	Hindi	Hun
dddd	0	monday	e hënë	الاثنين	astelehena	dilluns	星期一	pondělí	mandag	maandag	maanantai	lundi	luns	ნაშობობა	montag	δευτέρα	monar	hétfő
	1	tuesday	e martë	الاثنين	astezkoa	dimarts	星期二	úterý	tirsdag	dinsdag	tiistai	mardi	martes	ბაშაშობა	dienstag	τρίτη	marar	ked
	2	wednesday	e miércoles	الاثنين	asteazkena	dimecres	星期三	středa	onsdag	woensdag	keskiviikko	mercredi	miercores	ნაშაშობა	mitwoch	τρίτη	shar	szer
	3	thursday	e enfe	الخميس	osteguna	dijous	星期四	čtvrtek	torsdag	donderdag	torstai	jeudi	xoves	გოშაშობა	donnerstag	πέμπτη	thar	csüt
	4	friday	e prome	الجمعة	ostirala	divendres	星期五	pátek	fredag	vrijdag	perjantai	vendredi	varros	შაბაშობა	freitag	παρασκευή	shar	pén
	5	saturday	e shabte	السبت	larunbata	disabte	星期六	sobota	lördag	zaterdag	lauantai	samedi	sábado	შაბაშობა	samstag	σάββατο	shar	szo
	6	sunday	e diel	الأحد	igandea	diumenge	星期日	neděle	søndag	zondag	sunnuntai	dimanche	domingo	გაგაშობა	sonntag	კυριακή	shar	vas

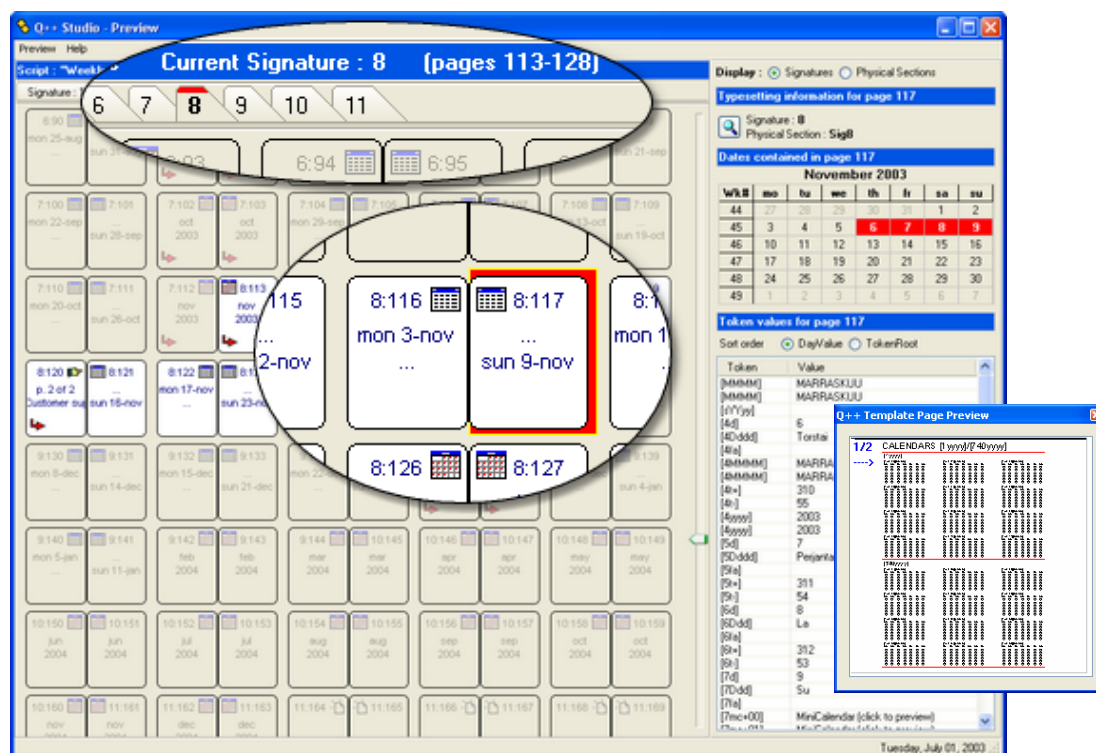
Most types of data used in Q++ can also be imported from an Excel file (possibly supplied by a customer or another department).

Finally it is also possible to use the Q++ *Data Pump* to import and export Q++ data (translations, holidays, moon phases ...) in its native form, with remote Q++ users or technical support.



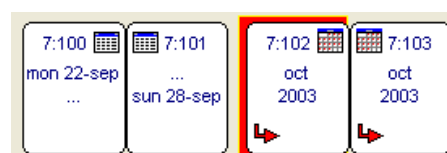
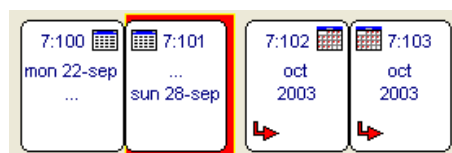
## Pre-Imposition

The Q++ script preview module presents information about the page layout and physical sections of the current diary in view of its processing by an external imposition package. This signature/page/date layout can be exported to MS-Excel format.



Selecting a signature or section highlights all the pages belonging to it (signature 8 in the example above), and selecting a page displays all the dates it contains in the preview calendar to the right (November 6-9 above), as well as the value of each token and variable element of the diary grid, including mini-calendars. The current diary grid or information page can also be previewed.

The preview module is also useful to validate the structure of the diary being generated. In the examples below, a monthly grid is inserted at the end of each month of a weekly diary (very easy to do in Q++). Selecting a dated page in the preview, displays the dates contained in that page.



Dates contained in page 101							
September 2003							
Wk#	mo	tu	we	th	fr	sa	su
36	1	2	3	4	5	6	7
37	8	9	10	11	12	13	14
38	15	16	17	18	19	20	21
39	22	23	24	25	26	27	28
40	29	30	1	2	3	4	5
41	6	7	8	9	10	11	12

Dates contained in page 102							
October 2003							
Wk#	mo	tu	we	th	fr	sa	su
40			1	2	3	4	5
41	6	7	8	9	10	11	12
42	13	14	15	16	17	18	19
43	20	21	22	23	24	25	26
44	27	28	29	30	31	1	2
45			5	6	7	8	9

### Token values for page 34

Sort order ☒ DayValue ☐ TokenRoot

Token	Value
[1*1d]	12
[a1*1Dddd]	Maanantai
[a1*1Dddd]	Måndag
[c1*1Dddd]	Monday
[1:st_a_ / ]	Julius Julia /
[1:st_e]	Julius Julia
[1fa_&s]	2. pääsiäispäivä / Annandag påsk / Eas
[1fe_&s]	
[1fö]	AUS AUT BEL CAN CHE CYP CZE DEL
[a1Mmm]	
[a1Mmm]	
[a1Mmm]	
[a1Mmm]	
[a1Mmm]	
[b1Mmm]	
[b1Mmm]	
[b1Mmm]	
[b1Mmm]	
[c1Mmm]	
[c1Mmm]	
[c1Mmm]	
[c1Mmm]	
[c1Mmm]	
[c1Mmm]	
[c1Mmm]	

### Token values for page 16

Sort order ☒ DayValue ☐ TokenRoot

Token	Value
[2YYYY]	1423
[b2YYYY]	١٤٢٣
[2mp]	
[2t+]	49
[2t-]	316
[3*2ShR]	
[3d]	19
[b3d]	١٩
[3Dddd]	Wednesday
[b3Dddd]	الأربعاء
[3id]	17
[b3id]	١٧
[3iMmmm]	Dhu al-Hijah
[b3iMmmm]	ذو الحجة
[3iYYYY]	1423
[b3iYYYY]	١٤٢٣
[b3immmm]	تسليط / هزيم
[3mp]	
[3t+]	
[3t-]	
[b3ywww]	
[4mp.w+00]	

### Minical Preview

[7mc+02] April 2004

	Mo	Tu	We	Th	Fr	Sa	Su
14				1	2	3	4
15	5	6	7	8	9	10	11
16	12	13	14	15	16	17	18
17	19	20	21	22	23	24	25
18	26	27	28	29	30		

**Token Date : Sun 8-Feb-2004**

April

### Token values for page 23

Sort order ☒ DayValue ☐ TokenRoot

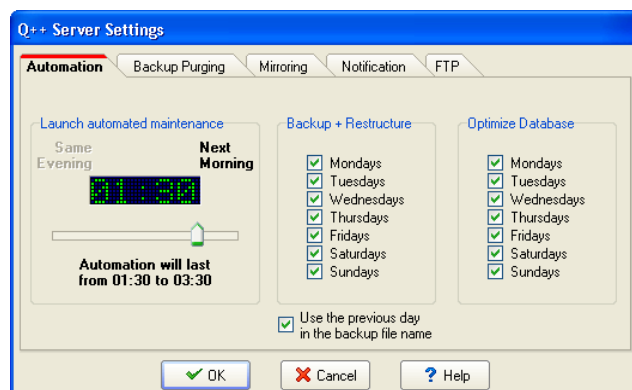
Token	Value
[MMMM]	FEBRUARY
[b4*9chdd]	初七日
[b4*9chmm]	二月
[4*9d]	26
[4*9DDDD]	THURSDAY
[b4*9dddd]	星期四
[4fa]	

► denotes formatted text, click on it for more details.

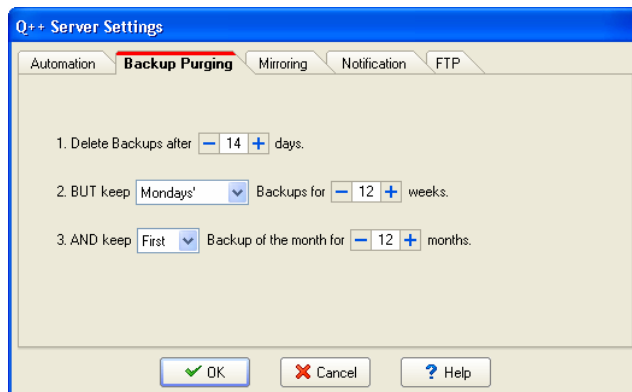
## Security Tools

The diary templates, diary-related data and scripts are the lifeblood of your product range. To protect it, Q++ includes many administration modules and tools to ensure that the data is always backed up and in optimal condition. These administration modules run on the server (p.31), either continuously or nightly.

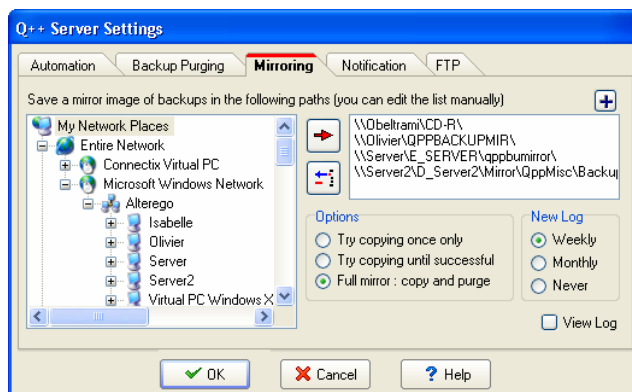
Q++ can be set up so that it will automatically perform a nightly backup and preventive maintenance of all its databases.



These backups can be purged according to a parameterizable schedule.



Mirror copies of the nightly backups can be made to remote locations.



## Data Restoration

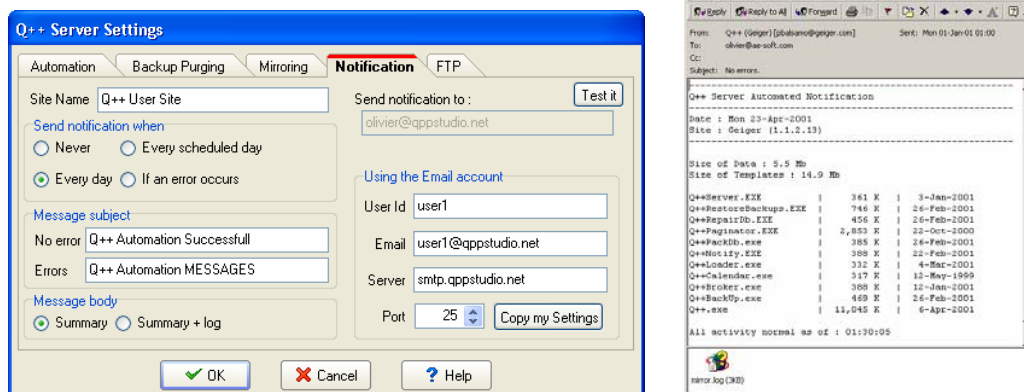
A powerful and user-friendly, *Restore from Backup* wizard helps users to restore data from backup, if ever necessary. This wizard guides the user step by step,



The wizard also ensures that the restoration respects the data's referential integrity, and that any structural changes that have been made to the database since the backup are applied to the restored data.

## Automated Notification

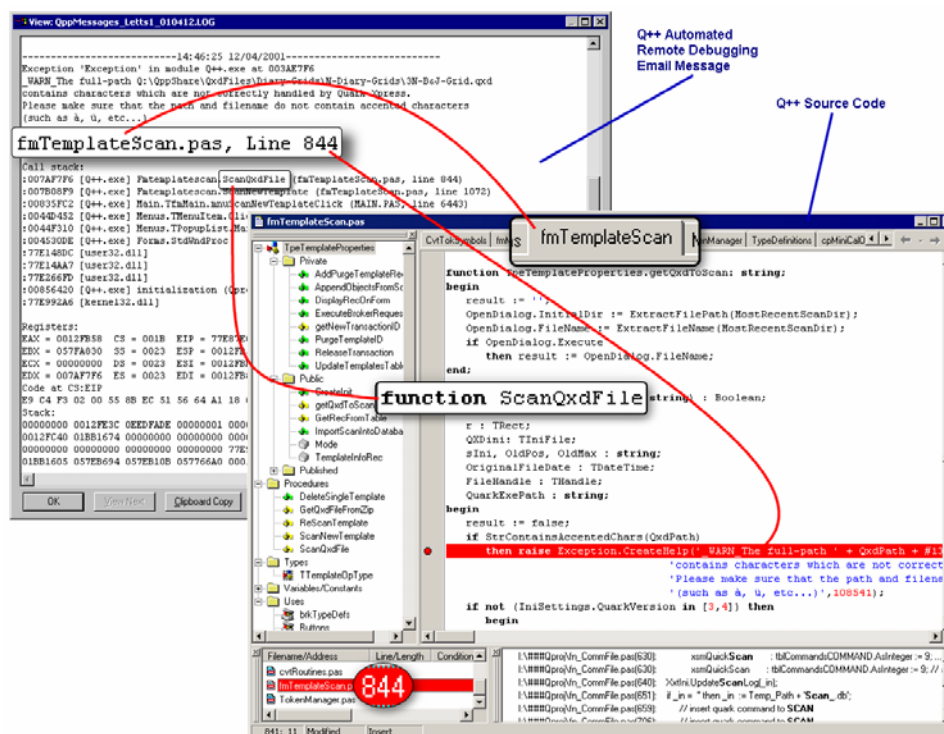
In line with its philosophy of preventive technical support, the Q++ notification module automatically sends a nightly email to Q++ technical support, informing it of the success or failure of the database backup and maintenance operations, as well as a log of any errors or warnings generated by Q++ during the past day.



## Remote Debugging

One important issue with any software, mostly one whose technical support cannot intervene on-site easily, is the ability of technical support to reproduce errors encountered on-site, to be able to address them.

Q++ includes built-in *remote debugging technology*, which identifies the source code file, function and line where any user error occurred, and forwards this information to technical support automatically.

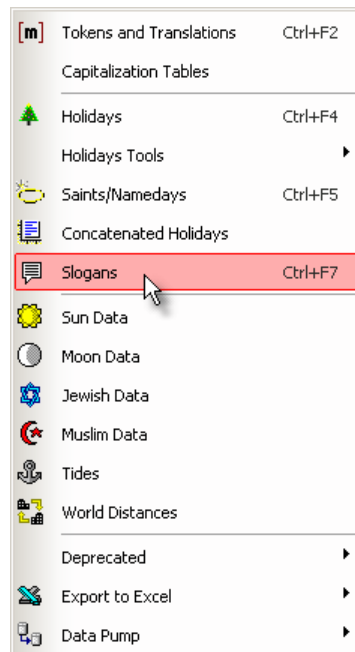


Technical support can then locate the source of the problem, without any need to guess or waste users' time asking them for details of the problem over the phone, even if the problem cannot be reproduced by technical support.

## Documentation and Help

Q++ is a user-friendly and intuitive tool that covers an enormous range of functionality. For this reason, user documentation and on-line assistance are at the heart of Q++ Studio.

### User Interface



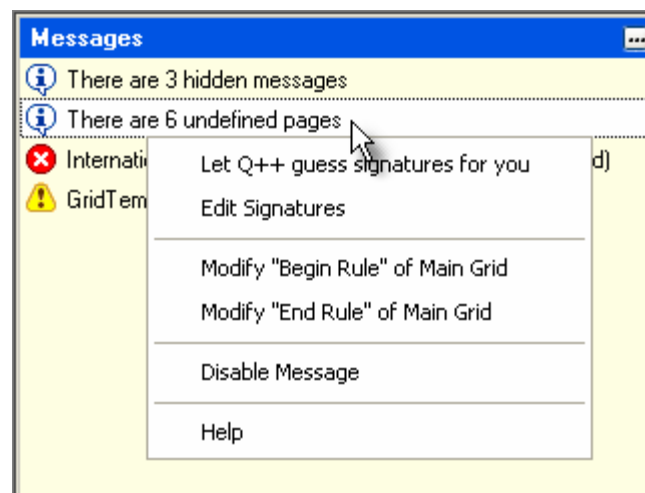
The first and foremost source of information to the user is the Q++ interface. The Q++ user interface includes all the modern user feedback tools one expects from professional software: menu shortcuts, toolbars and fly-by hints.

Elements of the interface, which correspond to disabled/forbidden actions, are modified visually to give immediate feedback to the user.

Additional information about the control on which the mouse is, is given in the status bar at the bottom of the Q++ main window. All dialog boxes in Q++ feature a Help button linked directly to the relevant topic of the contextual help file (p.26).

### Background Validation

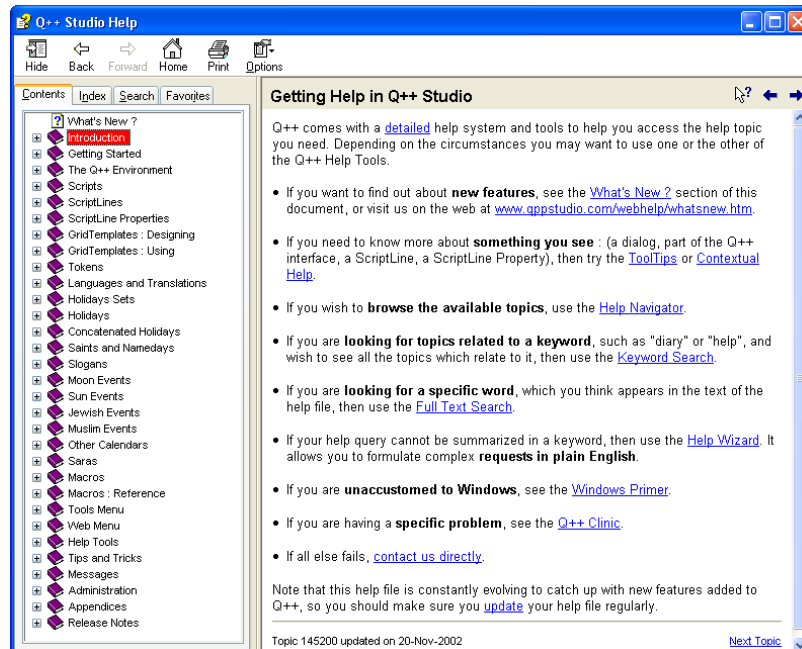
While a user is working on a diary, Q++ is constantly monitoring the settings and options selected, and issues non-interruptive hints and warnings in the messages pane of the Q++ main window (p.2).



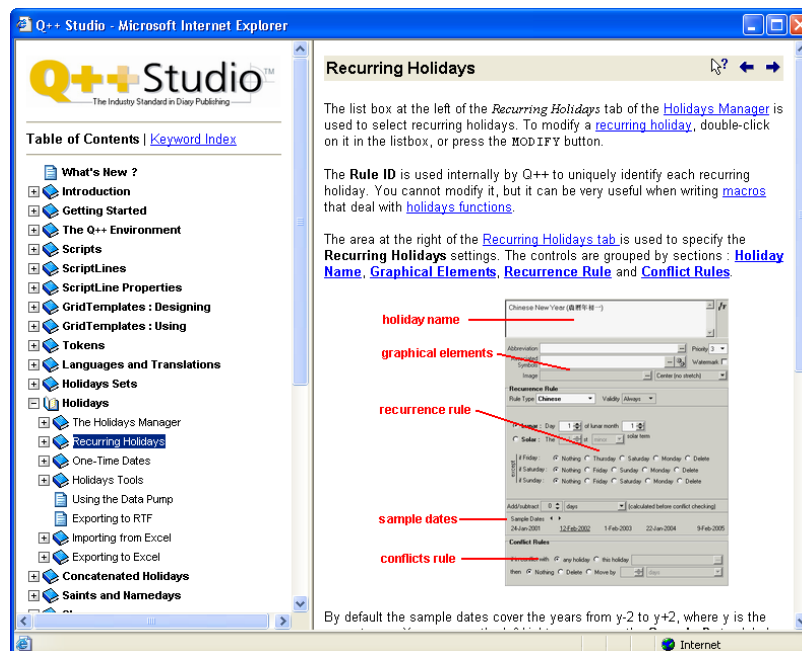
The user can then choose when to address each message, by clicking on it and selecting one of the solutions proposed by Q++ (see example above). Of course, each message is linked to the Q++ contextual help file.

## Help File

The Q++ help file<sup>4</sup>, contains over 1.500 topics and 15.000 hypertext cross-references between these topics. This help file is available as a Windows-based HTML-Help file, which allows for contextual links between each element of Q++ and a help file. Usually the appropriate help topic is invoked directly by pressing a dialog's Help button or the F1 key. However, Q++ also proposes many navigational tools to locate the exact help topic needed.



The Q++ help is also available in *WebHelp* format (see below), which can be accessed over the Internet ([www.qppstudio.net/webhelp](http://www.qppstudio.net/webhelp)) or a company Intranet, using a Web navigator. This is particularly useful if you choose to have diary grids done on a Macintosh, so that the help is also available to users in these conditions.

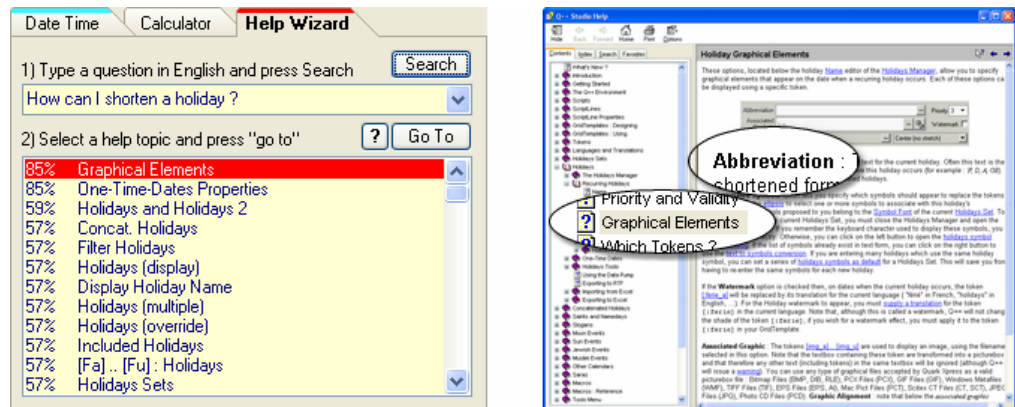


<sup>4</sup> Despite the constantly evolving nature of Q++ (p.29) the documentation of new features is usually included in a revised help file that is made available at the time of each update.



## Help Wizard

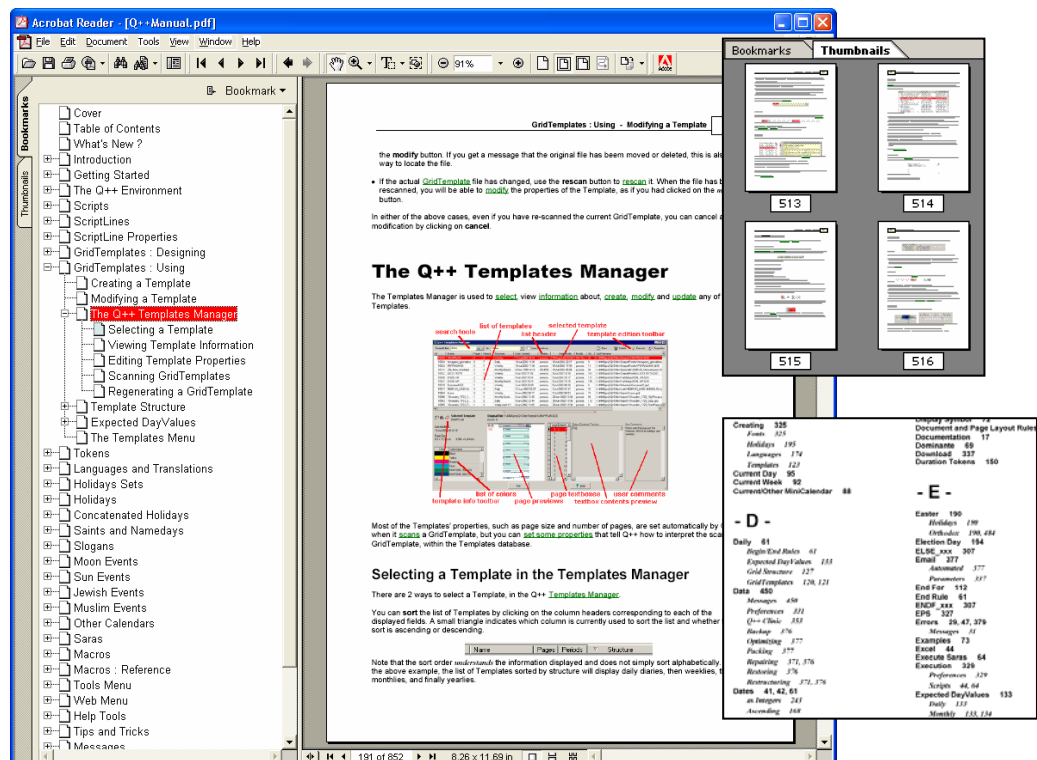
To assist users in their search for information in the help file, Q++ includes a *natural language* search engine, called the Help Wizard. Users can ask questions in plain English, and Q++ displays the help topics that most closely match the question.



As seen in the above example, the search is not limited to an exact match, or to the topics' titles, as is usually the case. The above search went through the text of each topic, using the natural language engine's understanding of English and synonyms to identify the topic "Graphical Elements" as the most appropriate, because it contained a paragraph on "abbreviation", close to a reference to "holidays names", knowing the relationship between the verb "to shorten" in the question, and the noun "abbreviation" in the help topic.

## Online Manual

The Q++ documentation is also available as an online manual in PDF format (also viewable on a Macintosh). This is useful when learning Q++, as it can be read sequentially, like a book.



This 1200+ page manual has hyperlinks to jump from one topic to another, a dynamic table of contents, thumbnail page previews, and a detailed index.

## Implementation

### Installation and Training

The installation and parameterization of Q++ lasts a day, provided the hardware configuration is properly installed beforehand (p.31). A total of 10 days of on-site training is available, in English, German, Spanish and/or French as requested by each individual user. The total period of 5-10 days for installation and training can be split into as many as 3 visits<sup>5</sup>.

### Customization

During the on-site, no obligation, presentation of Q++, the range of diaries of the prospective client is reviewed and any aspects that cannot be fully automated by Q++ are identified. These will then be reviewed and split into those that would be implemented before installation, those that may take longer, and those that would not be under consideration.

### Startup Assistance

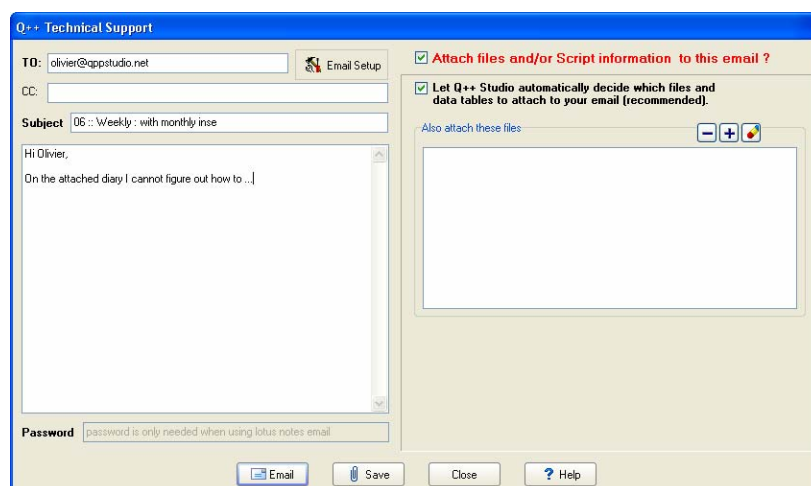
In the weeks following the installation and training, the new users will receive additional startup assistance: help coding diary templates, creating holidays rules and lists ...

## Product Support

Although Q++ is in English, technical and product support is available in both French and English, at each user's discretion.

### Technical Support

Technical support can be reached using any email client (such as Outlook, Notes, Eudora, ...). Q++ also includes its own email client which is specifically designed to automatically attach the files relevant to the current script



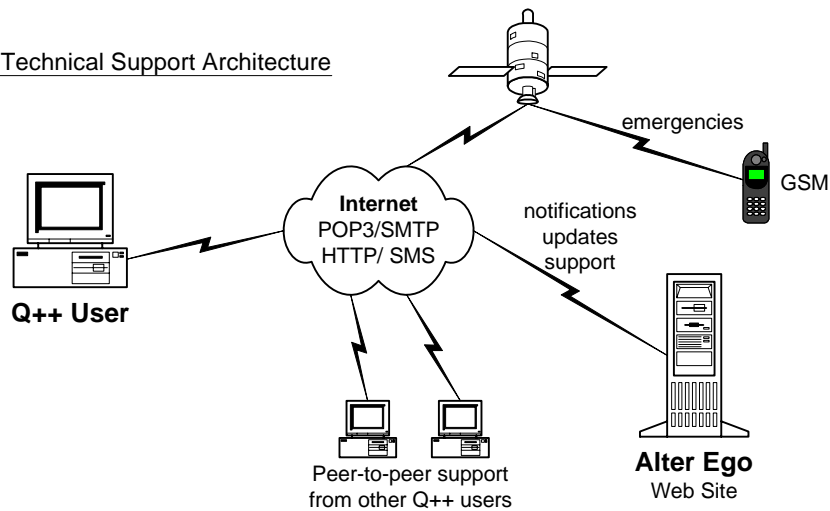
This ensures that all the files relevant to the issue at hand (diary grid, output file, and possibly even some of the data tables) are attached to messages to technical support without the user having to search for these files.

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<sup>5</sup> Travel and lodging expenses are paid by the client.



## Q++ Technical Support Architecture



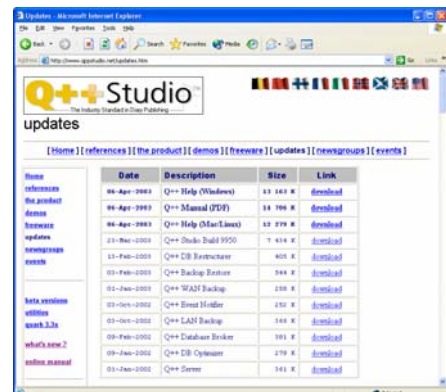
Q++ technical support is multi-faceted and includes:

- How to use Q++. We recognize that however good and complete a product's documentation is, there are times when the users need a quick answer, mostly in a cyclical business environment such as diary publishing. Such assistance can be obtained from technical support as well as from the community of other Q++ users.
- Assistance in coding a diary template or creating data to match your requirements (holidays, macros, SARAs, moon phases, ...).
- Emergency help in case of a blocking error. In such a case Q++ offers the user the option of automatically sending an SMS message directly to the mobile telephone of one of the Alter Ego support technicians.
- An option is available, free of charge, to have your nightly backups sent to our web servers and backed up remotely on CD-R media for additional security.

Support can also include more general discussions such as : the best way to implement a feature within Q++, as there are usually many ways to achieve the same goal in Q++, or how to train newly hired users.

## Updates

Updates to Q++ and its components (p.29) can be downloaded and installed automatically, using the *Q++ Web Update* module, or using a web browser such as Internet Explorer.



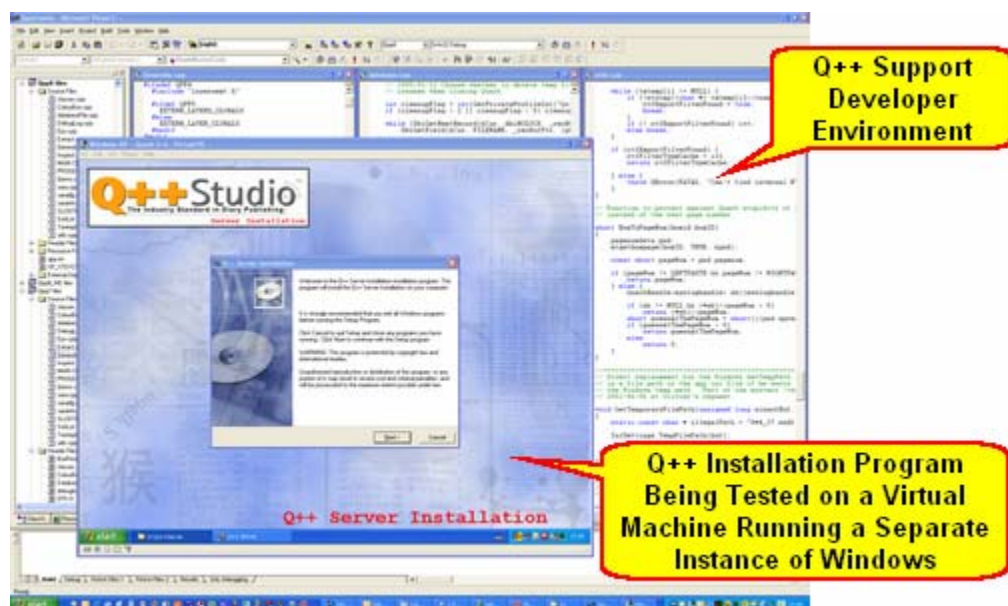
Users of Q++ are entitled to all updates to Q++ and its components, as part of the yearly maintenance agreement. These updates occur about once a month and cover a wide range of needs, such as:

- Maintenance releases to ensure compatibility with new versions of Windows, QuarkXPress and Internet Explorer.
- Bug fixes and optimization: most bugs are discovered internally through a continuous process of unit testing and optimization; users seldom notice these bugs.
- Modification and new functions, possibly as a consequence of user requests.
- Strategic development: every year Q++ users are consulted on the large-scale orientations that should be undertaken for the year to come. For example: should we concentrate on full Unicode compatibility (p.**Error! Bookmark not defined.**) or more pre-imposition features (p.21) ?

The relatively small number of Q++ users (less than 50) is ideally suited for this type of participative involvement of users in the development process. Past examples of the evolution of Q++ can be seen at [www.qppstudio.net/webhelp/whatsnew.htm](http://www.qppstudio.net/webhelp/whatsnew.htm).

## Remote Debugging

One important issue with any software, mostly one whose technical support cannot intervene on-site easily, is the ability of technical support to reproduce errors encountered on-site, to be able to address them.



Q++ includes built-in *remote debugging technology*, which identifies the source code file, function and line where any user error occurred, and forwards this information to technical support automatically.

## Annual Follow-Up

As part of the maintenance agreement, a technician from Alter Ego will come on site once a year for 2 days, at the client's discretion<sup>6</sup>. This yearly visit is used to cover *points that were not worth mentioning by email* (they all are worth mentioning), fully explain the new features

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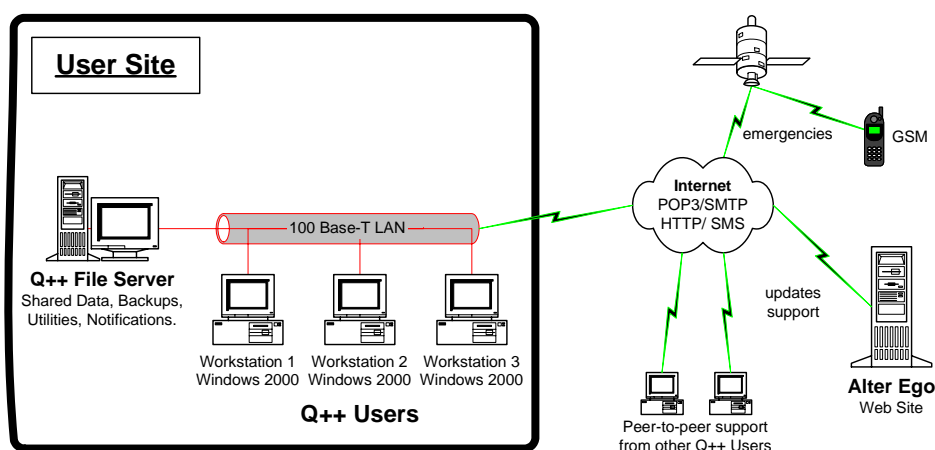
<sup>6</sup> Travel and lodging expenses are paid by the client.

implemented in the last 12 months, assist in training newly hired users, and generally ensure that Q++ is used optimally.

## Appendices

### Architecture

The recommended architecture, currently used at all sites where Q++ is installed, is one with a file server on which are installed the main executable, the administration tools, the shared databases and the shared diary templates.



The Q++ shared databases can accommodate 3 concurrent accesses, and there are no limits on the total number of non-concurrent users. Ideally, to maximize the benefits from the administration tools (p.23), the web updates, the Q++ server and workstations should be connected to a LAN which supports the usual protocols (FTP, POP, SMTP and HTTP) to the Internet.

### Required Hardware and Software Configuration

#### On each User Workstation

- Windows XP Professional, French or English.
- QuarkXPress<sup>7</sup> for Windows (versions 4 to 8 are supported).
- Pentium 1 GHz (Quark 4) or 2 GHz (Quark 5) or 3 GHz (Quark 6+).
- 128 MB RAM (Quark 4) or 256 MB RAM (Quark 5) or 512 MB RAM (Quark 6).
- 1000 MB available disk space (7200 rpm is optimum).
- 17-inch screen (19 is optimal) and video card capable of supporting resolutions of 1024x768 (1280x1024 is optimum) in 16 million colors.
- 100 Mbits network card.
- Internet access (128 Kbps minimum).
- WinZip or equivalent.
- Fontlab or similar font manipulation software (recommended).
- CD-RW drive (strongly recommended).

Equivalent PostScript fonts for both Mac and PC are not required but are strongly recommended.

<sup>7</sup> Licenses for QuarkXPress are not included in Q++Studio, and must be obtained separately.

### On the shared File Server

- Windows 2000 Professional or Windows XP Professional, French or English.
- Pentium 800 MHz.
- 128 MB RAM.
- 2000 MB available disk space (7200rpm is optimum).
- 100 Mbits network card.
- Internet access (128 Kbps minimum).
- CD-RW drive (strongly recommended).

The file server does not need an installed copy of QuarkXPress, and a 15-inch screen is sufficient.

## **Additional On-Line Information and Resources**

<http://www.qppstudio.net/qpp-eng.pdf> : the latest version of this document in **English**.

<http://www.qppstudio.net/qpp-spa.pdf> : the latest version of this document, in **Spanish**.

<http://www.qppstudio.net/qpp-port.pdf> : the latest version of this document, in **Portuguese**.

<http://www.qppstudio.net/qpp-ita.pdf> : the latest version of this document, in **Italian**.

<http://www.qppstudio.net/qpp-deu.pdf> : the latest version of this document, in **German**.

<http://www.qppstudio.net/worldholidays.htm> : an online excerpt of the Q++ database of the legal holidays, public holidays and bank holidays in all 240 countries and autonomous territories of the world, for this year.

<http://www.qppstudio.net/freeware.htm> : freeware to calculate various astronomical events such as sunrise, sunset, moon phases, moonrise, moonset, rising and setting of all planets, lunar and solar eclipses, Muslim Prayer Times (Salat), Jewish Times of the Day (Sabbath, Candle Lighting, ...).

## **Contact Information**

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Siret      422 153 023 00011

<http://www.qppstudio.net/coord.htm>

Phone    (+33) 2.51.13.01.68

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*Customer references are available upon demand.*

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