List & Label® 26

Programmer's Update Information

Contents

1. Update Information for Version 26

The overview of new features and changes in Report Server can be found in the Report Server manual.

1.1 Overview of new Features

- Different projects can be included in a print job by passing the project names semicolon-separated (requires data provider).
- Support for automated n-pass (requires data provider).
- Revised Drag & Drop UI for columns in tables.
- Support for sub reports (requires report container).
- New PDF export library. Improved output especially for complex graphics, smaller result files, CMYK image support, improved handling of Unicode fonts, selection of PDF version.
- Copies and page changes can be defined in label projects depending on formulas.
- The Viewer for preview files can now also display simple PDF files. No support for advanced PDF features such as form controls, signature fields or annotations.
- Greatly improved performance for C# scripts.
- Multi-page and poster printing.
- Print options dialog revised.
- Office 2019 ribbon UI for designers.

1.2 Overview of Changes

1.2.1 .NET

- The .NET Framework 4.0 is no longer supported, instead the .NET Framework 4.7 is the new base framework for .NET 4.x.
- In addition to .NET Core 3.1 now also support for .NET 5.
- More NuGet packages for data providers.
- Ad-hoc Designer with new features: Filter data source in charts, horizontal bar charts, support for images.
- SQL data sources can now be sorted by 1:1 fields.
- Parameterized data sources can work with NULL values as parameter defaults.
- The WebDesigner class names have been changed, a search and replace of WebDesigner → WindowsClientWebDesigner is required for the conversion.

- The namespaces no longer contain a version number. All namespaces whose names would have started with "combit.ListLabel26" now start with "combit.Reporting". This makes the version changeover much easier in the future.
- The default for SupportedElementTypes for many data providers has been changed from SupportedElementTypes to SupportedElementTypes.Tables | SupportedElementTypes.Views, so that the Designer now also displays the views by default.
- Casing of the parameters in the RegisterRoutes method of the WindowsClientWebDesignerConfig class adapted.
- DOM collections now no longer use CollectionBase, but Collection<T> as base class.
- MySqlDataProvider is now contained in a separate assembly and is no longer part of combit.ListLabel26.dll.

1.2.2 General

- The export formats **HTML** and **jQuery Mobile (JQM)** are no longer supported and are only included for compatibility reasons. By default, they are no longer displayed in the export dialog. If you still need these formats, for example, for sending mails (HTML) or for display on a mobile device (jQuery Mobile), you have to enable them explicitly via LlSetOption(hJob, LL_OPTIONSTR_LEGACY_EXPORTERS_ALLOWED,...) or via LL.Core.LlSetOptionString(...).

1.2.3 API

- The default of the **LL_PRNOPT_JOBPAGES** option has been changed from 16 to INT_MAX.
- The **LL_PRNOPT_PRINTDLG_ALLOW_NUMBER_OF_FIRST_PAGE** option has been added. This allows you to set the page number in the print dialog that starts on the first printed page.

1.3 Updating to List & Label 26

1.3.1 General

Please make sure to update your personal license key, since the key is version and user specific.

As with any software update, we highly recommend that you check all project and template files after updating. Improvements can sometimes mean that things are done slightly differently, which might have an unexpected impact on your projects.

1.3.2 Updating .NET Projects

Generally, the only thing to do is to replace the reference to the combit.ListLabel25.dll with a reference to the combit.ListLabel26.dll and to update the namespace references

(from combit.ListLabel25... to combit.Reporting...). Additionally, the older components should be removed from the toolbox and be replaced with the new components.

1.3.3 Updating Projects Using the OCX (e.g. Visual Basic)

- Load the Visual-Basic project (*.vbp resp. *.mak) in a text editor. Replace the line

```
Object={2213E283-16BC-101D-AFD4-040224009C18}#25.0#0; CMLL25O.OCX
```

with the following

```
Object={2213E283-16BC-101D-AFD4-040224009C19}#26.0#0; CMLL26O.OCX
```

and the line

```
Module= CMLL25; CMLL25.BAS
```

with the line

```
Module=CMLL26; CMLL26.BAS
```

- After saving your changes, load the form (*.frm) in a text editor, which contains the List & Label OCX. Replace the line

```
Object="{2213E283-16BC-101D-AFD4-040224009C18}#25.0#0";"CMLL26O.OCX"
```

with the following

```
Object="{2213E283-16BC-101D-AFD4-040224009C19}#26.0#0";"CMLL26O.OCX"
```

- If you wish to convert older List & Label versions, change the corresponding entries analogously. If you use the UNICODE OCX control, you need to adapt the control GUID. The new GUID is {2213E283-16BC-101D-AFD4-040224009DF9}.

- You can now load your projects in Visual Basic. The source code must be significantly adapted according to the original version.

- From VB 5 the .BAS declaration file is not necessary, because the List & Label constants are contained in the OCX control.

- Please note that it is not possible to host differently versioned OCXes (e.g. version 25 and 26) within the same application.

1.3.4 Updating Projects Using the VCL (e.g. Delphi)

- See the hints in the Delphi online help.

1.3.5 Updating Projects Using the API (e.g. C/C++)

- Adjust the reference to the declaration file to the current version (e.g. for C/C++ #in-clude "cmbtll25.h" to #include "cmbtll26.h")

- Adjust the reference to the corresponding import library analogously (e.g. in C/C++ in the linker settings cmbtll25.lib to cmbtll26.lib)

2. Update Information for Version 25

2.1 Overview of new Features

List & Label

- Support for HEIF and WebP image formats has been added.
- The user and sum variable dialogs are now searchable.
- The line widths in the Gantt chart are now adjustable.
- Texts can now be selected in the preview and copied to the clipboard.
- Charts now allow multiline legends.
- Sub-elements in the report container can now also be defined by filter conditions and do not necessarily require a relation.
- The axis for charts with linear, numeric x-axis can now be displayed logarithmically.
- The report container now supports horizontal and vertical continuous printing for XHTML and XLS exports.
- Multi-column tables can now also be output horizontally in the report container.
- Automatic adjustment of column widths to the content of the table.
- Groups of row definitions can be held together.
- With the new designer function "ChangeType()" values can be declared as constant in the filter.
- The sorting dialog now allows easy switching between ascending and descending.
- Support of signatures when sending mail.
- The axis labeling in pie charts now allows for breaks.
- The coordinate labels in bar charts can now be left-aligned.
- The minimum width of the task row can now be set in the Gantt chart.
- Added support for JSON as export format.
- Rscript output can now be imported 1:1 into the XHTML export.
- The Project Assistant is now also available as a 64-bit variant.
- Support for ZUGFeRD 2.0 has been added.
- Significant improvement of the preview performance for very large preview files.

Report Server

- SQL-based data sources now allow the use of routines/stored procedures. See the Report Server User Manual for more information.
- For scheduled reports, the new action "Webhook Call" has been added.

- In the Ad-hoc Designer, the table footer can now only be displayed on the last page.
- The export formats "List & Label Preview Format" and "JSON" have been added.
- Composite primary keys to define relations for data sources.
- Report parameters can now be defined via a wizard.
- Report Server settings can now be imported and exported.
- Connection strings can now be managed centrally.
- The "Copy File" action of the scheduled reports can now create a single ZIP file.
- The data source "GraphQL" has been added.
- Data sources Excel, XML and CSV now support data source parameters.
- The name of the main table for JSON-based data sources can now be changed.
- The OData data source now supports definable HTTP headers.
- The Query Wizard now also supports PostgreSQL.
- Reports based on a data source can now be displayed in a list.
- Scheduled reports via REST API now also support report parameters.

2.2 Overview of Changes

2.2.1 .NET

- .NET Framework Client Profile is no longer supported.
- .NET Framework 2.0 is no longer supported.
- .NET Standard is no longer supported.
- .NET Core 3.1 is now supported.
- NuGet packages for .NET are now available for almost all assemblies.
- Added support for GraphQL REST API data sources.
- Added the Headers property to RestDataProvider.
- Added the ISupportsParameters interface to RestDataProvider.
- WebDesigner: Removed the deprecated WebDesignerOptions.UseCDNType, Web-DesignerOptions.DataTheme and DesignerControl.CDNType properties. Code that uses these properties can be deleted (the WebDesigner does no longer use jQuery).
- Removed the obsolete ListLabelWebViewer and ListLabelMvcWebViewer controls.
- DOM: The KeepTogether property of a table no longer is a simple string but rather a class with different sub properties.
- Added a new event "ProcessText" to perform translations or hyphenations before printing or exporting. Can also be used for RTF content.

2.2.2 General

- The use of fields in tables with free content is no longer allowed. The contents of the field in this constellation were already random, so the use was prone to errors. The LL_OPTION_COMPAT_ALLOW_FIELDS_IN_STATIC_TABLE option can be used to re-store the previous behavior.

2.2.3 API

- Removed the **LL_OPTION_SUPPORT_HUGESTORAGEFS** option.
- Added the **LL_OPTION_COMPAT_PROHIBITFILTERRELATIONS** option to disable the selection of the link type of table subelements has been added.
- The **LL_OPTION_VARLISTDISPLAY** to determine the order of the variables/fields and folders in the associated tool window has been added.
- Added the **Export.Mail.SignatureName** option to attach an Outlook signature to a mail.
- Excel and XHTML/CSS Export: Added the **Export.InfinitePage** option for the "endless" page size.
- The **pszRelationID** parameter of the **LlPrintDbGetCurrentTableRelation** function can now also be empty if a sub-table has been inserted via a filter in the Designer.
- PDF Export: Added the **PDF.ZUGFeRDVersion** option for determining the ZUG-FeRDVersion.
- Added the Callback notification **LL_NTFY_EXPRERROR_EX**.
- XHTML/CSS Export: The default of option **XHTML.ToolbarType** has been changed to 4 (Web).

2.2.4 Delphi

- Delphi 6 and lower is no longer supported.
- Native List & Label API functions such as LlDefineVariableExt must be called in the FireDAC VCL component via the new Core object.

2.3 Updating to List & Label 25

2.3.1 General

Please make sure to update your personal license key, since the key is version and user specific.

As with any software update, we highly recommend that you check all project and template files after updating. Improvements can sometimes mean that things are done slightly differently, which might have an unexpected impact on your projects.

2.3.2 Updating .NET Projects

Generally, the only thing to do is to replace the reference to the combit.ListLabel24.dll with a reference to the combit.ListLabel25.dll and to update the namespace references. Additionally, the older components should be removed from the toolbox and be replaced with the new components.

2.3.3 Updating Projects Using the OCX (e.g. Visual Basic)

- Load the Visual-Basic project (*.vbp resp. *.mak) in a text editor. Replace the line

  ```
  Object={2213E283-16BC-101D-AFD4-040224009C18}#24.0#0; CMLL24O.OCX
  ```

-        with the following

  ```
  Object={2213E283-16BC-101D-AFD4-040224009C19}#25.0#0; CMLL25O.OCX
  ```

-        and the line

  ```
  Module= CMLL24; CMLL24.BAS
  ```

-        with the line

  ```
  Module=CMLL25; CMLL25.BAS
  ```

- After saving your changes, load the form (*.frm) in a text editor, which contains the List & Label OCX. Replace the line

  ```
  Object="{2213E283-16BC-101D-AFD4-040224009C18}#24.0#0";"CMLL24O.OCX"
  ```

-        with the following

  ```
  Object="{2213E283-16BC-101D-AFD4-040224009C19}#25.0#0";"CMLL25O.OCX"
  ```

- If you wish to convert older List & Label versions, change the corresponding entries analogously. If you use the UNICODE OCX control, you need to adapt the control GUID. The new GUID is {2213E283-16BC-101D-AFD4-040224009DF9}.

- You can now load your projects in Visual Basic. The source code must be significantly adapted according to the original version.

- From VB 5 the .BAS declaration file is not necessary, because the List & Label constants are contained in the OCX control.

- Please note that it is not possible to host differently versioned OCXes (e.g. version 24 and 25) within the same application.

2.3.4 Updating Projects Using the VCL (e.g. Delphi)

-        See the hints in the Delphi online help.

2.3.5 Updating Projects Using the API (e.g. C/C++)

Generally, the only thing to do is to replace the reference to the import library (e.g. cmll25.lib) and declaration file (e.g. cmbtll25.h) with a reference to the files corresponding to the current version.

3.   Update Information for Version 24

3.1 Overview

3.1.1   .NET

- A Windows Installer Setup (.msi) is now available for the Web Designer for installation via command line, e.g. for distribution via group policy.
- The obsolete properties WebDesignerOptions.UseCDNType, WebDesig-nerOptions.DataTheme and DesignerControl.CDNType have been removed. Code that uses these properties can be easily deleted because the Web Designer no longer has any jQuery references.
- The Web Designer now also supports Designer objects and functions via an optional configuration.
- Support for ASP.NET MVC Core. The combit.ListLabel24.Web.dll is now available as .NET Standard 2.0 assembly.
- The REST data provider can now pass additional request headers (e.g. for authentication).
- Support for parameterized data sources with automatic parameter creation.
- Updated CloudStorageProviders.
- HTML5 viewer displays charts as SVGs and supports drilldown via report parameters for charts.
- Via LlOptionString.EmbeddedExportFormats export formats can be embedded in preview printing in data-bound mode (DOCX, XLS,...). These are then also available in the viewer.
- Improved CsvDataProvider (encoding, separator recognition).
- Removed some obsoleted classes (e.g. ListLabelWebViewer).

3.1.2   General

- The Designer now has the ability to search for content and search & replace content.
- You can use LL_OPTIONSTR_EMBEDDED_EXPORTS to pass a list of formats (e.g. "DOCX;XLS;PDF") that you want to make available in the preview. These are then also available in the viewer.
- The property "Expandable Region " is also available for groupings.
- Crosstabs can also be created by drag & drop.
- Crosstabs can be automatically converted to charts using the context menu. The selected data dimensions are copied.
- The preview has a new refresh behavior, with drilldown and expandable regions the control is no longer emptied, but the content is switched directly.

- The preview control has new features to customize the look & feel.
- Clearly noticeable performance increase in list printing.
- New Designer function CountryFlag() for displaying country flags.
- There is a new type "Rscript" in the chart object. In addition, visualizations created via Rscript can be used in List & Label.
- Support for various PDF/A formats in PDF export.

3.1.3 API

- The option LL_OPTION_TABSTOPS has been removed.
- The option LL_OPTION_IDLEITERATIONCHECK_MAX_ITERATIONS for setting the maximum number of attempts to print an object has been added.

3.1.4 Report Server

- Ad-hoc Designer: Optional automatic preview.
- Ad-hoc Designer: Optional limitation of the data volume for preview.
- Ad-hoc Designer: Date format for print date now adjustable.
- Better display of charts in the preview.
- Support for new Designer features (see above).
- Report templates: Improved selection of data sources.
- Data sources: Support for data source parameters.
- Data sources: Organization in folders as with report templates.
- Data sources: REST data source now supports definable HTTP headers (e.g. for authentication).
- Data sources: REST data source now supports setting a timeout.
- Scheduled reports: Improved selection of report templates.
- Scheduled reports: New actions for Cloud Storage upload for Google Drive, Microsoft OneDrive and Dropbox.
- Report Server Designer: A Windows Installer Setup (.msi) is now available for installation via command line, e.g. for distribution via group policy.
- Native apps for managing and exporting reports are now available for Android and iOS.

3.2 Updating to List & Label 24

3.2.1 General

Please make sure to update your personal license key, since the key is version and user specific.

As with any software update, we highly recommend that you check all project and template files after updating. Improvements can sometimes mean that things are done slightly differently, which might have an unexpected impact on your projects.

3.2.2 Updating .NET Projects

Generally, the only thing to do is to replace the reference to the combit.ListLabel23.dll with a reference to the combit.ListLabel24.dll and to update the namespace references. Additionally, the older components should be removed from the toolbox and be replaced with the new components.

Changes Compared to the Previous Version

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3.2.3 Updating Projects Using the OCX (e.g. Visual Basic)

- Load the Visual-Basic project (*.vbp resp. *.mak) in a text editor. Replace the line

    ```
    Object={2213E283-16BC-101D-AFD4-040224009C17}#23.0#0; CMLL23O.OCX
    ```

- with the following

    ```
    Object={2213E283-16BC-101D-AFD4-040224009C18}#24.0#0; CMLL24O.OCX
    ```

- and the line

    ```
    Module= CMLL23; CMLL23.BAS
    ```

- with the line

    ```
    Module=CMLL24; CMLL24.BAS
    ```

- After saving your changes, load the form (*.frm) in a text editor, which contains the List & Label OCX. Replace the line

    ```
    Object="{2213E283-16BC-101D-AFD4-040224009C17}#23.0#0";"CMLL23O.OCX"
    ```

- with the following

    ```
    Object="{2213E283-16BC-101D-AFD4-040224009C18}#24.0#0";"CMLL24O.OCX"
    ```

- If you wish to convert older List & Label versions, change the corresponding entries analogously. If you use the UNICODE OCX control, you need to adapt the control GUID. The new GUID is {2213E283-16BC-101D-AFD4-040224009DF8}.

- You can now load your projects in Visual Basic. The source code must be significantly adapted according to the original version.

- From VB 5 the .BAS declaration file is not necessary, because the List & Label constants are contained in the OCX control.

- Please note that it is not possible to host differently versioned OCXes (e.g. version 23 and 24) within the same application.

3.2.4 Updating Projects Using the VCL (e.g. Delphi)

- See the hints in the Delphi online help.

3.2.5   Updating Projects Using the API (e.g. C/C++)

Generally, the only thing to do is to replace the reference to the import library (e.g. cmll24.lib) and declaration file (e.g. cmbtll24.h) with a reference to the files corresponding to the current version.

4.   Update Information for Version 23

4.1 Overview

4.1.1   .NET

- The ListLabel component has a new property DataBindingMode, defaulting to "DelayLoad". This mode will only load necessary meta data.
- The web designer is also using this interface, leading to a huge performance gain.
- You may now configure relations between tables from different providers as long as they support the IAdvancedFiltering interface (see CrossDataProviderRelation class).
- Queries for report parameters now use DISTINCT if possible, leading to a huge performance gain.
- New Salesforce data provider.
- Ad-hoc Designer available as new control, new sample.
- Report Server is part of the Enterprise Edition, new API to upload data sources and project files, new samples.
- The HTML5 viewer supports changing the current page by scrolling with the mouse wheel. Use the ExtendedScrolling option to disable this feature.
- The DbCommandSetDataProvider has a new event Execute DbCommand that allows to change the created commands before they are sent to the database.
- Web Designer: Added support for all cookie-based authentication types, including OWIN / ASP.NET Identity. The WebDesignerConfig.AuthenticationMode can be set to two new modes: AspNetIdentityOrOWIN and CustomCookie. Web Applications based on OWIN/ASP.NET Identity will work with WebDesignerAuthenticationModes.Automatic now, a custom authentication can be configured using the new WebDesignerConfig.AuthenticationCustomCookieName property.
- Web Designer: Removed dependencies on the jQuery and jQuery Mobile frameworks. The new Web Designer control does not require require any additional files from the server and offers more possibilities for customization via CSS.
- Web Designer: New properties to set the user interface language for a client: WebDesignerOptions.Language (for MVC) and DesignerControl.Language (for WebForms).

4.1.2   General

- The designer shows virtual formula variables underneath the fields and variables (e.g. "first letter" for strings).
- Pie and donut charts support setting pie coverage. This enables a number of new chart layouts, e.g. half pie charts.

- The chart object supports signal ranges in order to highlight certain areas.
- Support for SVG as image format.
- SVG export was completely overhauled.
- Crosstabs can be edited directly in the workspace, new context ribbon.
- The Designer's error list window contents can be copied to the clipboard.
- Copied user variables now support custom names.
- Allow date values for minimum / maximum aggregate functions.
- The time part of report parameters of the date type can now be selected in a date/time picker.
- Reduced memory footprint for crosstabs.
- Added new export option 'PDF.FileAttachments'for PDF export to be able to add additional files into the resulting PDF container.
- Improved line break behavior for RTF contents in XHTML support.
- New option LL_OPTION_PREVIEW_SCALES_RELATIVE_TO_PHYSICAL_SIZE allows to display a page in its true physical size when setting the zoom to 100% in the preview.
- Signature provider esiCAPI in option Export.SignatureProvider is not supported anymore.
- Word Export now supports only Microsoft Word® 2010 and higher.
- Variables with invalid characters are now treated as such. The previous behavior of List & Label 22 can be restored by setting the option LL_OPTION_COMPAT_ALLOW_INVALID_CHARS_IN_SINGLEFIELDFORMULA to 1. Note that this will result in a loss of performance.

4.1.3 API

- The option LL_OPTION_POSTPAINT_TABLESEPARATORS is the new default.
- The option LL_OPTION_PARTSHARINGFLAGS now defaults to 0xff.

4.1.4 Report Server

- Ad-hoc Designer: New chart types "Radar/Web", "Treemap" and "Funnel"
- Ad-hoc Designer: Possibility to group after a certain number of characters
- Ad-hoc Designer: Possibility to cancel the preview for extensive data sources
- Ad-hoc Designer: Simplified table selection
- Report Elements: Shapefiles are now supported
- Report Elements: SVG graphics are now supported
- Data Sources: Salesforce is now supported
- Data Sources: Relations between diverse data sources

- Data Sources: SQLite data sources now support the query assistant
- Data Sources: The Advantage Database Server is now supported via ODBC driver
- Scheduled Reports: Support of placeholder/variables
- Scheduled Reports: Filename of email attachments can now be defined
- Scheduled Reports: Filename when copying to network drives can now be defined
- Scheduled Reports: User defined directory and filename for FTP upload can now be defined
- Report Server Designer: Application is now DPI-Aware
- System requirements: The lowest supported operating system is now Windows Server 2008 R2 (64-Bit)

4.2 Updating to List & Label 23

4.2.1 General

Please make sure to update your personal license key, since the key is version and user specific.

As with any software update, we highly recommend that you check all project and template files after updating. Improvements can sometimes mean that things are done slightly differently, which might have an unexpected impact on your projects.

4.2.2 Updating .NET Projects

Generally, the only thing to do is to replace the reference to the combit.ListLabel22.dll with a reference to the combit.ListLabel23.dll and to update the namespace references. Additionally, the older components should be removed from the toolbox and be replaced with the new components.

Changes Compared to the Previous Version

- Web Designer: Removed the obsoleted properties WebDesignerOptions.DataSourceIDs, DesignerControl.DataSourceIDs and the event OnRequestDataProvider. The initially provided data source is stored by List & Label now, so you do not need to create any additional instances anymore after the WebDesigner control has been rendered. Usually you can simply remove all code related to that property/event.
- Web Designer: Removed the obsoleted properties WebDesignerOptions.Border, WebDesignerOptions.Height, WebDesignerOptions.Width and WebDesignerOptions.CssClass.
- Web Designer: Obsoleted the properties WebDesignerOptions.UseCDNType, WebDesignerOptions.DataTheme and DesignerControl.CDNType. These properties are ignored in version 23 and will be removed in a later version.
- Removed LegacyMongoDbDataProvider (was obsoleted in 22)

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- Made obsoleted XmlDataProvider constructors private
- DOM: fixed typo in property name 'ZAxis' of the PropertyChartEngineTreeMapClustered class (was 'ZAxes' before)
- The ListLabel object does not dispose the "base" set of ITable objects it retrieves from the data provider anymore, as this destroys caching scenarios. The IDataProvider implementor is now responsible to Dispose() any existing ITable instances in its own Dispose() method.
- The AdoDataProvider's schema row now contains true "null" values instead of an empty string. This also affects the behavior of the AutoDefineField/AutoDefineVariable event, as e.Value might be null now.
- The AdoDataProvider now checks if fields and variables are used at all in the layout and only passes the used ones at print time. This might change the behavior of e.g. the AutoDefineField event, as you will only get this event for used fields. If you need all fields, set the CheckUsedIdentifiers property to false.

4.2.3   Updating Projects Using the OCX (e.g. Visual Basic)

- Load the Visual-Basic project (*.vbp resp. *.mak) in a text editor. Replace the line

```
Object={2213E283-16BC-101D-AFD4-040224009C16}#22.0#0; CMLL22O.OCX
```

with the following

```
Object={2213E283-16BC-101D-AFD4-040224009C17}#23.0#0; CMLL23O.OCX
```

and the line

```
Module= CMLL22; CMLL22.BAS
```

with the line

```
Module=CMLL23; CMLL23.BAS
```

- After saving your changes, load the form (*.frm) in a text editor, which contains the List & Label OCX. Replace the line

```
Object="{2213E283-16BC-101D-AFD4-040224009C16}#22.0#0";"CMLL22O.OCX"
```

with the following

```
Object="{2213E283-16BC-101D-AFD4-040224009C17}#23.0#0";"CMLL23O.OCX"
```

- If you wish to convert older List & Label versions, change the corresponding entries analogously. If you use the UNICODE OCX control you need to adapt the control GUID. The new GUID is {2213E283-16BC-101D-AFD4-040224009DF7}.
- You can now load your projects in Visual Basic. The source code must be significantly adapted according to the original version.
- From VB 5 the .BAS declaration file is not necessary, because the List & Label constants are contained in the OCX control.
- Please note that it's not possible to host differently versioned OCXes (e.g. version 22 and 23) within the same application.

4.2.4 Updating Projects Using the VCL (e.g. Delphi)

- See the hints in the Delphi online help.

4.2.5 Updating Projects Using the API (e.g. C/C++)

Generally, the only thing to do is to replace the reference to the import library (e.g. cmll23.lib) and declaration file (e.g. cmbtll23.h) with a reference to the files corresponding to the current version.

5. Update Information for Version 22

5.1 Overview

5.1.1 .NET

- The new "Repository Mode" allows to completely avoid local file paths in the projects through the stream-based IRepository interface, making it much easier to use List & Label in distributed (web) applications.
- The new logging interface allows to use logging frameworks like NLog or log4net as well as custom logging mechanisms to capture the debug output of List & Label.
- The Web Designer now supports Forms- and Windows Authentication via the new property WebDesignerConfig.AuthenticationMode.
- Franking with Deutsche Post Internetmarke
- New WPF Wrapper for PreviewControl
- The Web Designer and the Html5Viewer have been refactored to be easier to use and to use less resources on the server.
- The new property DesignerControl.CDNType allows to specify the source for external libraries of the Web Designer (jQuery etc.).

5.1.2 API

- New API LlGetLastErrorText which returns the List & Label error text and the detailed windows error.

5.1.3 Barcodes

- New 2D-Barcode MicroPDF417
- New 2D-Barcode Codablock-F

5.1.4 Export

- The PDF export does not change the font-scaling if the used printer-device uses a distorted resolution.

5.1.5 Functions

- New functions GetIniString(...) and GetRegistryString(...)
- New function GS1Text$()
- New function IBAN$
- New optional parameter for the function CheckMod10() that allows a different/correct weighting for the check digit

5.1.6   General

- Sort orders can now be set by formula. Hint: If you are using the DOM property 'SortOrderID', the value now must get a string mask.
- Properties can be added to favorites
- Preview animations for objects
- New design schemes "combit Blue" and "combit Green"
- In the "Select Data Source" dialog a search field for datasources is now available

5.1.7   Tables, Crosstabs and Charts

- New properties "Keep Group Together" and "Keep Data Together" for tables
- New property "Reset Page Counter" for group header and report container sub-element
- Resizing the columns when changing the column count is now optional (AutoMessageBox)
- Crosstabs now support multiple result cells, cross-row and column references, automatic fill-up, Top-N and expandable regions
- New chart types Radar and Treemap
- Coordinate lines for X-Axis can be defined for Line, Area and Bubble charts.
- New option "Limit To" (Top-N report) for Bar charts
- New sorting options for the chart types Circle/Donut, Bar/Ribbon, Line/Symbol, Areas and Bubbles/Dots
- In a symbol chart the used symbols can now be selected individually
- In the chart types Line/Symbol, Areas and Bubbles/Dots different line styles and width can now be defined.

5.2   Updating to List & Label 22

5.2.1   General

Please make sure to update your personal license key, since the key is version and user specific.

As with any software update, we highly recommend that you check all project and template files after updating. Improvements can sometimes mean that things are done slightly differently, which might have an unexpected impact on your projects.

5.2.2   Updating .NET Projects

Generally, the only thing to do is to replace the reference to the combit.ListLabel21.dll with a reference to the combit.ListLabel22.dll and to update the namespace references.

Additionally, the older components should be removed from the toolbox and be replaced with the new components.

Changes Compared to the Previous Version

- The DesignerControl now disposes the assigned parent ListLabel instance after the page was rendered (incompabilities are possible if the ListLabel instance is not only used for rendering the DesignerControl).

- Project.Save() saves the project synchronously instead of asychoronously as before to a possibly passed in stream, whereas Project.Close() will just release the ressources.

- DesignerFunctions.Add() now allows to pass IDesignerFunction instead of DesignerFunction.

- The deprecated Web Designer browser plugins and the related properties DesignerControl.PluginCompatibility and WebDesignerOptions.PluginCompatibility have been removed.

- The DesignerControl.Close event has been removed. The ListLabel instance passed in DesignerControl.ParentComponent gets disposed internally now.

- The Web Designer does not support Windows XP anymore.

- GetProjectType is no longer available as static method of LlCore, use the instance specific LlUtilsGetProjectType method of LlCore instead.

5.2.3 Updating Projects Using the OCX (e.g. Visual Basic)

- Load the Visual-Basic project (*.vbp resp. *.mak) in a text editor. Replace the line

    ```
    Object={2213E283-16BC-101D-AFD4-040224009C15}#21.0#0; CMLL21O.OCX
    ```

    with the following

    ```
    Object={2213E283-16BC-101D-AFD4-040224009C16}#22.0#0; CMLL22O.OCX
    ```

    and the line

    ```
    Module= CMLL21; CMLL21.BAS
    ```

    with the line

    ```
    Module=CMLL22; CMLL22.BAS
    ```

- After saving your changes, load the form (*.frm) in a text editor, which contains the List & Label OCX. Replace the line

    ```
    Object="{2213E283-16BC-101D-AFD4-040224009C15}#21.0#0";"CMLL21O.OCX"
    ```

    with the following

    ```
    Object="{2213E283-16BC-101D-AFD4-040224009C16}#22.0#0";"CMLL22O.OCX"
    ```

- If you wish to convert older List & Label versions, change the corresponding entries analogously. If you use the UNICODE OCX control you need to adapt the control GUID. The new GUID is {2213E283-16BC-101D-AFD4-040224009DF6}.

- You can now load your projects in Visual Basic. The source code must be significantly adapted according to the original version.

- From VB 5 the .BAS declaration file is not necessary, because the List & Label constants are contained in the OCX control.
- Please note that it's not possible to host differently versioned OCXes (e.g. version 21 and 22) within the same application.

5.2.4   Updating Projects Using the VCL (e.g. Delphi)

- See the hints in the Delphi online help.

5.2.5   Updating Projects Using the API (e.g. C/C++)

Generally, the only thing to do is to replace the reference to the import library (e.g. cmll21.lib) and declaration file (e.g. cmbtll21.h) with a reference to the files corresponding to the current version.

6. Update Information for Version 21

6.1 Overview

6.1.1 General/API

- True .NET 4.0 builds for the assemblies support new features (see below). Usage of .NET 4.0 is highly recommended where possible.

6.1.2 New Features

- Conditional formatting in the Designer
- Browser-independent Web Designer with real data preview (.NET only)
- Drag & Drop overhauled, create tables and subtables directly via D&D, drop variables on existing text paragraphs to append content
- Enhanced color picker
- Overriding specific default font properties
- New toolwindow: Formula Errors
- AutoRecover for the Designer
- Enhanced User- and Sumvariable dialog with multiselect and copy/paste
- Optionally hide objects from include files
- Support for nested includes
- Streamlined Ruler Guides
- The structure of the report container now hides relation names from the UI where they aren't needed.
- The report container itself now has a frame property
- Support for Form Control objects in tables
- Adapted look and feel for toolbars and property grid
- New "Colors" tab in the formula wizard to ease the creation of formulas that need color parameters
- Improved object tree scrolling when using Drag & Drop
- Using the standard Windows common dialog for search in the preview
- Optional automatic position adaption of objects when flipping orientation
- Enhanced PDF export with Type3 support, direct ZUGFeRD generation, enhanced PNG rendering and support for combo form controls
- Support for nested tables (.NET only)
- Native aggregate functions (.NET only, selected data providers)

- New data providers: Cassandra, SharePoint, Oracle via new managed Oracle provider (.NET only)
- Enhanced data provider: ObjectDataProvider in .NET 4.0 build now uses LINQ to support sorting, filtering and native aggregates (.NET only)
- Enhanced data provider: ODataDataProvider offers support for OData V4 (.NET only)
- Enhanced data provider: DbCommandSetDataProvider in .NET 4.0 build has a new query builder/analyzer that can cope with much more complex queries (.NET only)

6.2   Updating to List & Label 21

6.2.1   General

Please make sure to update your personal license key, since the key is version and user specific.

As with any software update, we highly recommend that you check all project and template files after updating. Improvements can sometimes mean that things are done slightly differently, which might have an unexpected impact on your projects.

6.2.2   Updating .NET Projects

Generally, the only thing to do is to replace the reference to the combit.ListLabel20.dll with a reference to the combit.ListLabel21.dll and to update the namespace references. Additionally, the older components should be removed from the toolbox and be replaced with the new components.

Changes Compared to the Previous Version

- The browser-plugin-based DesignerControl was replaced with the browser-independent Web Designer. The required adjustments can be found in chapter "Web Designer" of the Programmer's Manual.
- Changed default for MaximumRecursionDepth of ObjectDataProvider to 3 (before: 10)
- Changed default for FlattenStructure of ObjectDataProvider to true (before: false)
- The OracleConnectionDataProvider from combit.ListLabel20.DataProviders.Oracle (combit.ListLabel20.OracleConnectionDataProvider.dll) was integrated into combit.ListLabel21.DataProviders (combit.ListLabel21.dll) and replaces the old and obsolete OracleConnectionDataProvider that was depending on the unsupported OracleClient from System.Data.OracleClient. To use the new Oracle DataProvider, ODP.NET must be installed, the ADO.NET drivers Oracle.ManagedDataAccess.Client (recommended) and Oracle.DataAccess.Client are supported.
- DbConnectionDataProvider has new property "SupportsAdvancedFiltering" that must be overridden.
- LlGetOption now returns IntPtr.
- Added support for the new 3.* versions of Npgsql.

- AddTableEventArgs was renamed to DefineTableEventArgs.

6.2.3   Updating Projects Using the OCX (e.g. Visual Basic)

- Load the Visual-Basic project (*.vbp resp. *.mak) in a text editor. Replace the line
  ```
  Object={2213E283-16BC-101D-AFD4-040224009C14}#20.0#0; CMLL20O.OCX
  ```
  with the following
  ```
  Object={2213E283-16BC-101D-AFD4-040224009C15}#21.0#0; CMLL21O.OCX
  ```
  and the line
  ```
  Module= CMLL20; CMLL20.BAS
  ```
  with the line
  ```
  Module=CMLL21; CMLL21.BAS
  ```

- After saving your changes, load the form (*.frm) in a text editor, which contains the List & Label OCX. Replace the line
  ```
  Object="{2213E283-16BC-101D-AFD4-040224009C14}#20.0#0";"CMLL20O.OCX"
  ```
  with the following
  ```
  Object="{2213E283-16BC-101D-AFD4-040224009C15}#21.0#0";"CMLL21O.OCX"
  ```

- If you wish to convert older List & Label versions, change the corresponding entries analogously. If you use the UNICODE OCX control you need to adapt the control GUID. The new GUID is {2213E283-16BC-101D-AFD4-040224009DF5}.

- You can now load your projects in Visual Basic. The source code must be significantly adapted according to the original version.

- From VB 5 the .BAS declaration file is not necessary, because the List & Label constants are contained in the OCX control.

- Please note that it's not possible to host differently versioned OCXes (e.g. OCX version 20 and 21) within the same application.

6.2.4   Updating Projects Using the VCL (e.g. Delphi)

- See the hints in the Delphi online help.

6.2.5   Updating Projects Using the API (e.g. C/C++)

Generally, the only thing to do is to replace the reference to the import library (e.g. cmll20.lib) and declaration file (e.g. cmbtll20.h) with a reference to the files corresponding to the current version.

7. Update Information for Version 20

7.1 Overview

7.1.1 General/API

- New callback "LL_QUERY_EXPR2HOSTEXPRESSION"
- New API *LlPrintDbGetCurrentTableFilter()*
- New flag LL_ADDTABLEOPT_SUPPORTSADVANCEDFILTERING for *LlDbAddTable()*

7.1.2 New Features

- Parameterized subreports (in fields, table lines, crosstab cells, pie/funnel chart, bar chart)
- Optional native database filtering support (see General/API)
- Multiple Report Containers (.NET only)
- Real-data preview: export to Word, XHTML and Excel possible if the host supports the Drilldown callback.
- Office 2013 style for the Ribbon UI, general look & feel facelift.
- Format painter added for (most) objects and table cells. In ribbon and in 'old-style' menu.
- OLE-Container can now use a formula for its contents.
- Checkbox object
- PPTX-Export
- "Objects" tool window now contains the information of the "Report Structure" tool window.
- The position of pasted objects is now where the cursor is, not the original position of the copied object.
- The standalone preview window now also has a zoom slider control.
- Static tables are now supported as sub-tables as well.
- Added new buttons to comment and uncomment selection in the function wizard.
- Moving objects out of the workspace now scrolls the workspace to the movement direction.
- Dimensions shown when an object is resized, background is faded away.
- ALT-key pressed when resizing: the width is rounded to the coordinate (mm/in)
- Added new context ribbon button for table column resize mode
- Editor font is now selectable and is serialized to the registry. "Show Text in Layout Preview" is removed and always true now.

- When pasting a table line into a line def group that just contains one empty (default) line definition, this empty definition is deleted on paste.
- LocNumber$ has an optional third parameter for the digits.
- Expandable regions can be collectively opened/closed in the preview
- Formula Wizard tweaks: more reliable autocomplete, Ctrl+Space triggers autocomplete, better handling for autocomplete listbox
- New error code LL_ERR_NO_SUCH_INFORMATION if LlGetUsedIdentifiers[Ex] is used for a file without such information
- D&D now also adds footer fields with automatic sums. Use CTRL as modifier to only add a header.
- Progress meters are unified across exporting and printing.
- Added new button in Designer ribbon that enables to resize both vertically and horizontally in one move.
- DWG (and so the drawings inside LL) do now support temporary download of images
- XHTML supports rotated texts (standalone & in table cells). Vastly improved look and feel of export result.
- SetVar has a new optional third parameter to decide if the set value should also be output

7.2   Updating to List & Label 20

7.2.1   General

Please make sure to update your personal license key, since the key is version and user specific.

As with any software update, we highly recommend that you check all project and template files after updating. Improvements can sometimes mean that things are done slightly differently, which might have an unexpected impact on your projects.

7.2.2   Updating .NET Projects

Generally, the only thing to do is to replace the reference to the combit.ListLabel19.dll with a reference to the combit.ListLabel20.dll and to update the namespace references. Additionally, the older components should be removed from the toolbox and be replaced with the new components.

What's New

- Support for native database filtering for many data providers.
- New databinding mode to support multiple report containers. Set the property "NewDataBindingMode" to "false" to revert to the old behavior.
- New class AccessDataProvider
- New class Google BigQuery DataProvider

- New class InMemoryDataProvider
- XlsDataProvider supports Excel 2013 files
- DbConnectionDataProvider: 1:1 relations are now using JOIN statements for SQL providers -> much better performance
- Improved support for In-Memory databases (SQLite), filtering, sorting and count are properly supported.

Changes Compared to the Previous Version

- DbConnectionDataProvider has a new abstract member SupportsAdvancedFiltering. If your provider uses standard SQL (Microsoft SQL), you can return "true". Otherwise returning "false" is more secure to avoid SQL syntax errors when filtering data. See the documentation in the .NET component's online help.
- The SqlConnectionDataProvider class has been incorporated into the main assembly, the separate provider assembly is no longer required nor available.
- LlGetOption now returns IntPtr instead of int. Please use an explicit type cast where necessary.

7.2.3 Updating Projects Using the OCX (e.g. Visual Basic)

- Load the Visual-Basic project (*.vbp resp. *.mak) in a text editor. Replace the line
    ```
    Object={2213E283-16BC-101D-AFD4-040224009C13}#19.0#0; CMLL19O.OCX
    ```
    with the following
    ```
    Object={2213E283-16BC-101D-AFD4-040224009C14}#20.0#0; CMLL20O.OCX
    ```
    and the line
    ```
    Module= CMLL19; CMLL19.BAS
    ```
    with the line
    ```
    Module=CMLL20; CMLL20.BAS
    ```
- After saving your changes, load the form (*.frm) in a text editor, which contains the List & Label OCX. Replace the line
    ```
    Object="{2213E183-16BC-101D-AFD4-040224009C13}#19.0#0";"CMLL19O.OCX"
    ```
    with the following
    ```
    Object="{2213E183-16BC-101D-AFD4-040224009C14}#20.0#0";"CMLL20O.OCX"
    ```
- If you wish to convert older List & Label versions, change the corresponding entries analogously. If you use the UNICODE OCX control you need to adapt the control GUID. The new GUID is {2213E280-16BC-101D-AFD4-040224009DF3}.
- You can now load your projects in Visual Basic. The source code must be significantly adapted according to the original version.
- From VB 5 the .BAS declaration file is not necessary, because the List & Label constants are contained in the OCX control.
- Please note that it's not possible to host differently versioned OCXes (e.g. OCX version 19 and 20) within the same application.

7.2.4   Updating Projects Using the VCL (e.g. Delphi)

- See the hints in the Delphi online help.

7.2.5   Updating Projects Using the API (e.g. C/C++)

Generally, the only thing to do is to replace the reference to the import library (e.g. cmll19.lib) and declaration file (e.g. cmbtll19.h) with a reference to the files corresponding to the current version.

8. Update Information for Version 19

8.1 Overview

8.1.1 General/API

- Label projects now also support the usage of LlDbAddTable, LlDbAddTableSortOrder and LlPrintDbGetCurrentTableSortOrder for exactly one table, allowing for sort orders in label projects.

8.1.2 New Features

- Support for Windows 8.1, Visual Studio 2013
- Optimizations for high DPI displays
- New chart types (Shapefile, Funnel, Donut)
- Extended chart features (mix bar and lines, aggregate with previous values, best fit etc.)
- Report Parameters
- Collapsible regions in the preview
- Interactive sorting in the preview
- Collection variables to summarize data
- Sorting support for label projects (using LlDbAddTableSortOrder)
- Various new designer features
- SVG export
- Viewer application with Ribbon
- QR code has configurable version

8.2 Updating to List & Label 19

8.2.1 General

Please make sure to update your personal license key, since the key is version and user specific.

As with any software update, we highly recommend that you check all project and template files after updating. Improvements can sometimes mean that things are done slightly differently, which might have an unexpected impact on your projects.

8.2.2 Updating .NET Projects

Generally, the only thing to do is to replace the reference to the combit.ListLabel18.dll with a reference to the combit.ListLabel19.dll and to update the namespace references.

Additionally, the older components should be removed from the toolbox and be replaced with the new components.

What's New

- OData DataProvider

- REST DataProvider

- SharePoint 2013 support

- FlattenStructure property for ObjectDataProvider presents a much easier view of the object model if structs or classes are used as members.

- FlattenNodesWithNoAttributes property for XmlDataProvider displays Nodes with no attributes as flat instead of using the value field name.

- LoadDeferredContent is now also called for class properties in the ObjectDataProvider. This allows to call LoadProperty() on the object right in the moment it is needed.

Changes Compared to the Previous Version

- The Color property of the PropertyChartConditionalColor class now returns a string instead of a color (color can be a formula now).

- The JsonDataProvider is no longer a separate assembly – it has been added to the main assembly combit.ListLabel19.dll.

- FlattenStructure property in JsonDataProvider is set to true by default.

- Changed all DOM properties named "...Backside..." to "...ReverseSide..." in order to align the naming with the UI.

9. Update Information for Version 18

9.1 Overview

9.1.1 General/API

- The file extension of the label template file was changed from INF to LTPL
- New APIs: *LlJobStateSave*/*LlJobStateRestore*
- OCX/VCL: The *SaveAsFilePath* property now returns the user-defined file name when using the *SaveAs* method.
- .NET: The *SaveAsFileName* property now returns the user-defined file name when using the *SaveAs* method.

9.1.2 New Features

- Starting with Windows Vista, the Designer now uses the Windows Ribbon framework by default. The user may switch off the ribbon in the project's options dialog. *LL_OPTION_RIBBON_DEFAULT_ENABLEDSTATE* can be used to modify this behavior. The current setting is stored in the registry hive HKCU\Software\combit\cmbtll\<AppName>\Designer.Ribbon.Active. Set this text value to 'T' or 'F' to determine your application's look and feel.
- The preview now has a multi page view mode. Use zooming or panning to navigate between the pages.
- The designer preview doesn't only show the currently selected object in the report container but rather the whole container tree.
- Comprehensive performance optimizations most notable when printing lists.
- Comprehensive multi threading optimizations.
- Adaptions for Windows 8, support for gestures.
- Repeated images in preview files are only embedded once (much smaller files).
- Support for back side printing (e.g. GTC).
- New export formats: Office Open XML, jQuery mobile.
- Improved MHTML export (uses XHTML).
- *LL_OPTION_ALLOW_COMBINED_COLLECTING_OF_DATA_FOR_-COLLECTIONCONTROLS* allows multiple objects within the report container to consume the same data.
- Caching of printer device contexts (s. LL_OPTION_PRINTERDCCACHE_TIMEOUT_-SECONDS)
- New barcode format PZN-8.

9.2   Updating to List & Label 18

9.2.1   Updating .NET Projects

Generally, the only thing to do is to replace the reference to the combit.ListLabel17.dll with a reference to the combit.ListLabel18.dll and to update the namespace references. Additionally, the older components should be removed from the toolbox and be replaced with the new components.

What's New

- New AjaxViewer web control: display preview files without any client side installation. Different modes are available (with/without carousel, with/without reflection).

- New DesignerControl web control. After installing the respective CAB file or AddOn on the client machine, the Designer can be used directly within the browser.

- The DesignerObject class has new properties "SmallRibbonImage", "LargeRibbonImage" and "TooltipDescription" for ribbon support.

- Support for backside printing in the object model (PropertyReportSectionBackside).

- The "FieldType" attribute enables the ObjectDataProvider to choose the desired field type for a property.

- The XmlDataProvider supports attributes to preset the field type as well.

- LlIdentifierType-Enumeration has a new value "Files". This way, LlGetUsedIdentifiers can be used to retrieve a list of file dependencies (templates, table of contents, backside etc.).

Changes Compared to the Previous Version

- New assembly combit.ListLabel18.Web. This assembly contains all web controls.

- The "old" ListLabelWebViewer-Control is still contained in the combit.ListLabel18.dll assembly but has been marked obsolete. Change the reference to the new assembly and change the namespace to combit.ListLabel18.Web.

- The DefineVariables/DefineFields events aren't browsable anymore (they were obsolete since version 15).

- The ITableColumn interface has a new member FieldType which allows to determine the List & Label field type for a column. To get the identical behavior to version 17 with minimal changes, simply return LlFieldType.Unknown.

10. Update Information for Version 17

10.1 Overview

10.1.1 General/API

- HTML.Charset is fixed to UTF-8, all other settings are ignored.
- XML.Charset is fixed to UTF-8, all other settings are ignored.
- LL_OPTION_CONVERTCRLF defaults to TRUE.
- If multiple consecutive layout regions use the same printer, they are printed in one single print job if possible.
- XLS.ConvertNumeric defaults to 3.
- Label projects only have a "Base" layer by default.
- Improved automatic scale selection for gauges.
- The default for Picture.JPEGQuality is now 75 instead of 100
- The option PDF.JPEGQuality is no longer documented, use the Picture.JPEGQuality option instead.

10.1.2 New Features

- New chart types: area, bubble.
- New designer objects: PDF, Data Graphic, Gantt.
- Support for index and table of contents.
- Support for design schemes in many objects.
- Progress dialogs use the default OS style on Vista and newer.
- The layer dialog supports copy/paste.
- The report container has a new context menu.
- The group sum dialog is resizable.
- Objects from templates have a new context menu action allowing to edit the template quickly.
- New viewer plugins for Windows versions of Firefox, Chrome, Opera and Safari.
- The RTF export embeds pictures as JPEGs resulting in much smaller files.
- Report container items can now support stacked sortings (*see LlDbAddTableEx()*).
- User and sum variables can be edited directly via the field-/variable list's context menu.
- The XHTML export result has a new toolbar for paging and searching the result file.
- The XLS export now optionally generates XLSX files and is supported on x64.

- New Designer functions: Precalc, ChangeLightness, Roman$.

10.2 Updating to List & Label 17

10.2.1 Updating .NET Projects

Generally, the only thing to do is to replace the reference to the combit.ListLabel16.dll with a reference to the combit.ListLabel17.dll and to update the namespace references. Additionally, the older components should be removed from the toolbox and be replaced with the new components.

What's New

- New data providers: JsonDataProvider, CouchDbDataProvider, MongoDbDataProvider.
- Many data providers support multiple (stacked) sortings.
- New event "LoadDeferredContent" for ObjectDataProvider.
- RTF object has new events and methods.
- Designer objects can now use "real" designer properties (DesignerProperty classes).
- New converter class for RPT files (Crystal Reports).
- New property "UseHardwareCopiesForLabels" for ListLabel.
- New control "DesignerControl" to host the designer in custom WinForms.
- Support for new properties and designer objects in the object model.

Changes Compared to the Previous Version

- The LlConst enumeration is internal (was obsolete since version 16, new name is LlConstants).
- The LlProjectParameter enumeration is internal (was obsolete since version 16, use the new ProjectParameter classes).
- Some obsoleted members were removed.
- The ProhibitedActions property of ListLabel now is Collection<T> (was List <T>).
- The ITable interface has a new method "SupportsAdvancedSorting". If implementors return "true", the user may apply multiple stacked sortings in the Designer which are returned tab separated in the ApplySort method.
- New namespace "DesignerExtensions".
- The LlLanguage enumeration was cleaned up.

11. Update Information for Version 16

11.1 Overview

- HTML.Charset ist fixed to UTF-16, all other settings are ignored.

- XML.Charset ist fixed to UTF-16, all other settings are ignored.

- Preview files that contain PNG images are not displayed correctly with viewer versions older than version 16.

- New functions:

  LlLocAddDesignLCID()

  LlLocAddDictionaryEntry()

  LlGetDefaultPrinter()

- New options:

  LL_OPTION_NULL_IS_NONDESTRUCTIVE

  LL_OPTION_ RESETPROJECTSTATE_FORCES_NEW_PRINTJOB

  LL_OPTION_RESETPROJECTSTATE_FORCES_NEW_DC

Starting with version 16, the shell extension cmll15sx.dll is no longer available as it frequently caused the Windows Explorer to block important files from being updated.

Starting with version 16, the control panel applet cmmx15.cpl is no longer available. You cann access the underlying functionality using the LsMailConfigurationDialog-API from your own application.

11.2 Updating to List & Label 16

11.2.1 General

Please make sure to update your personal license key, since the key is version and user specific.

As with any software update, we highly recommend that you check all project and template files after updating. Improvements can sometimes mean that things are done slightly differently, which might have an unexpected impact on your projects.

11.2.2 Updating .NET Projects

Generally, the only thing to do is to replace the reference to the combit.ListLabel15.dll with a reference to the combit.ListLabel16.dll and to update the namespace references. Additionally, the older components should be removed from the toolbox and be replaced with the new components.

What's New

- The ListLabel class does have a new member "ProjectParameters" which enables you to work with project parameters comfortably. Up to now that was only possible with methods from the LlCore object.

- The methods of the Dictionary property of the ListLabel component now have overloads to support localization features. For the same reason there is a new list of supported languages in the DesignerWorkspace class.

- The Print and Design methods have new overloads that allow the stream-based passing of project file and printer settings. This is particularly of interest if the information is to be stored in a database.

Changes Compared to the Previous Version

- The class PropertyFillingChart has been renamed to PropertyFillingWithBitmap and inherits PropertyFillingExt.

- The LlConst enumeration has been marked with the "Obsolete" attribute. Generally all constants are already available in other enumerations. For the handful of constants that may be used in the code itself, there is a new enumeration, LlConstants.

- The project parameter methods of the LlCore object have been marked as "Obsolete" as well. Use the new ProjectParameters property of the ListLabel class instead.

- The AutoDesignerFile property of the ListLabel object has been renamed to AutoProjectFile. To ensure code compatibility the old property still exists, however it has been marked as "Obsolete".

- The Fields property in the Dictionary object has been marked as "Obsolete". Use the Identifiers property instead.

- The new default value of the property AutoDestination is now LlPrintMode.Export (up to now: LlPrintMode.Preview). Thus all print targets are available now as default.

- The *LlXSetParameter()* method in the LlCore class has been marked as "Obsolete". If you've implemented your own printing loop, you can ignore the this warning. If you are using databinding you should use the 'ExportOptions' property of the ListLabel class to set export options instead.

- Some APIs that already had been marked as "Obsolete" in the previous version are now private (e.g. *LlDesignerProhibitAction()*). Use the corresponding objects (e.g. DesignerWorkspace.ProhibitedActions) instead.

- The type of the sender argument passed to AutoDefineField and AutoDefineVariable is ListLabel consistently.

11.2.3   **Updating** Projects Using the OCX **(e.g. Visual Basic)**

Changes Compared to the Previous Version

- Setting the SupportPageBreak property to False will be ignored

- The event CmndTableLine has received an additional parameter sContent

- Various enumerations have been extended
- Support for *LlLocAddDictionaryEntry()*, *LlLocAddDesignLCID()*

12. Update Information for Version 15

12.1 New Functions/Options

12.1.1 DLL-API

- New functions:

  LlDbAddTableSortOrderEx
  LlDbAddTableRelationOrderEx
  LlAssociatePreviewControl

- New callback:

  LL_NTFY_VIEWERDRILLDOWN

- New options:

  LL_OPTION_FORCEFIRSTGROUPHEADER
  LL_OPTION_RTFHEIGHTSCALINGPERCENTAGE
  LL_OPTION_FORCE_DEFAULT_PRINTER_IN_PREVIEW

- Modified options:

  LL_OPTION_ PRINTERDEVICEOPTIMIZATION

12.2 Upgrading to List & Label 15

12.2.1 General

Please make sure to update your personal license key, since the key is version and user specific.

The file format has changed between List & Label Version 14 and 15. Converting projects is normally no problem with the new version. A warning message is shown by default if the user is converting an old project into the new format. You can suppress this message with *LL_OPTION_NOFILEVERSIONUPGRADEWARNING*. Pre-existing projects will be converted in the background during print time.

As with any software update, we highly recommend that you check all project and template files after updating. Improvements can sometimes mean that things are done slightly differently, which might have an unexpected impact on your projects.

Printers with equal DEVMODE structure are handled differently. See *LL_OPTION_ PRINTERDEVICEOPTIMIZATION* for further information.

List & Label has an enhanced exception handler.

DOM: The property *SourceTablePath* of *SubItemChart* has been modified in regard to the separator character. For compatibility reasons (SQL server schema support) the separator from now on is ";" instead of ".". For example "Customers;Orders(Customers2Orders)".

Rounding now is a symmetrical arithmetically rounding instead of the former used banker rounding.

Providing an empty string ("") as the value for numeric variables/fields will now be considerd as a NULL value. In older List & Label versions this case was implicitely considered as the numerical value "0".

12.2.2   Converting .NET Projects

Databinding has been extended in version 15. If you've been using DataTable or DataView objects as datasource, you might need to set the "AdvancedDatabinding" property of the component to "False" in order to successfully print older projects. For new projects you should keep the default setting of "True" to profit from report container and designer preview features when using these datasources.

Data sources that support the IEnumerable or IEnumerable<T> interface will now use the report container. Another advantage is that caching as data set in memory is obsolete. Existing projects are not compatible. To print such projects you can set the option "LegacyEnumBinding" "True". The default value is "False".

The naming of the DOM namespace has been modified. For example

   combit.ListLabel14.Dom.**ListLabelDomProjectList**

has been renamed to

   combit.ListLabel15.Dom.**ProjectList**

In addition "DesignerObject" has been renamed to "ExtensionObject".

A corresponding search & replace process should be done.

13. Update Information for Version 14

13.1 Brief Summary

13.1.1 General

- New filtering options for variables/fields and functions in the designer
- Revised function wizard
- New formatting "time span"
- New formatting "exponential"
- Extended charting: rows
- Optional support for real data preview in the designer
- Support for different layout regions. A flexible way to choose different target printers and/or page layouts
- .NET: code generation from DOM objects
- DOM general: support for chart rows, layout regions and other new designer features
- Preview files can contain table of contents
- Preview files can directly embed JPEG files without prior conversion to BMP
- New view mode for property window (hide constant functions)
- Ruler guides can be moved with the CTRL key pressed in order to move all doecked objects as well
- Designer extensions using LlDesignerAddAction (new for Standard Edition)
- Comments in formulas (new for Standard Edition)

13.2 New Functions/Options

13.2.1 DLL-API

- New functions:

    LlGetProjectParameter

- New Options:

    LL_OPTION_NOAUTOPROPERTYCORRECTION
    LL_OPTION_SUPPORT_HUGESTORAGEFS
    LL_OPTION_DESIGNERPREVIEWPARAMETER
    LL_OPTION_DESIGNEREXPORTPARAMETER
    LL_OPTION_DESIGNERPRINTSINGLETHREADED

14. Update Information for Version 13

14.1 Brief Summary

14.1.1 General

- Completely revised chart object: new optics, several axes, logarithmic scales, bar rotation by 90°
- DOM functions for dynamic project creation and modification
- Tables can be printed with multiple columns
- Preview can be displayed during printing
- Reduced preview files
- New presentation mode for preview
- Unicode support for export modules
- New XPS export format
- Objects can optionally be exported as an image
- Export results can be automatically compressed into ZIP archive
- New API for localized request of error text
- .NET/VCL: Convenient handling of DOM functions via extensive class model
- .NET: Databinding support for LINQ objects

14.1.2 Interface

- Completely revised table dialog; "infinite" number of line definitions, all at a glance in new tree structure
- Properties of several table lines can be modified simultaneously
- Report containers can have several columns
- Support for free contents in tables
- Completely revised chart dialog, formulas for chart properties
- Revised function wizard
- Revised print options dialog
- New barcode types: QR code and ISBN
- Codeset for Code128 can be controlled
- Extended wrap options for crosstabs
- New options for text objects: always wrap text, fit text optimally
- New options for text fields in tables: always use fixed height
- New Designer functions Exists(), Evaluate(), GetValue()

14.2 New functions/options

14.2.1 DLL-API

- New functions:

    LlDomGetObject
    LlDomGetSubobjectCount
    LlDomGetSubobject
    LlDomCreateSubobject
    LlDomDeleteSubobject
    LlDomSetProperty
    LlDomGetProperty
    LlProjectOpen
    LlProjectClose
    LlProjectSave
    LlGetErrortext
    LlDlgEditLineEx

- New options:

    LL_OPTION_INCREMENTAL_PREVIEW

14.3 Modified Functions/Options

- The default setting for LL_OPTION_INCLUDEFONTDESCENT is now *TRUE.* This prevents the truncation of extreme descenders, but can mean that the layout is slightly different from List & Label 12. If this causes problems in your projects, you can reset the value of the option to the old default setting (*FALSE*) at any time.

15. Update Information for Version 12

15.1 Summary

15.1.1   General

- Crosstabs
- Easier coding for charts (also in table columns) using the *LlDb...()*-APIs
- Support for digital signatures
- .NET/VCL/OCX: convenient support for dictionaries
- .NET: data binding support for generic list classes
- HTML export: frames using CSS
- XLS export: optional new worksheet for each page
- New ActiveX controls for function and object Designer extensions
- Java: JNI-DLL

15.1.2   User Interface

- New tool window "Report structure" supporting tables, charts and crosstabs
- New property "Datasource" for charts (also in table columns) and crosstabs
- Completely reworked icons
- Anti-aliasing and increased color depth for preview sketch files
- Support for fixed barcode bar width
- Support for variable barcode bar ratio
- New barcode SSCC/NVE
- New tool window for project properties
- New property "Minimum Page Count" for project
- Support for gradient fills
- Appearance condition for text paragraphs and table columns
- Improved page wrap for HTML object

15.2 New Functions/Options

15.2.1   DLL-API

- New options:

    LL_OPTION_ENABLE_STANDALONE_DATACOLLECTING_OBJECTS
    LL_OPTIONSTR_VARALIAS

- New callback:
    LL_CMND_SAVEFILENAME

15.3 Changed Functions/Options

15.4 .NET Component

- The *LlDbAddTable()*, *LlDbAddTableSortOrder()* and *LlDbAddTableRelation()* APIs of the core object no longer have a "DisplayName" parameter. Use the new dictionary object, e.g. LL.Dictionary.Tables.Add("Orders", "Bestellungen").

16. Update Information for Version 11

16.1 Summary

16.1.1 General
- API support for relational data structures and hierarchical reports
- Designer: Aggregate functions
- NULL-value support
- .NET: completely rewritten data binding
- .NET: extensive new online help
- VCL: completely rewritten data binding
- Support for page x/y without 2-pass technique
- Improved Excel export
- Improved RTF export
- Conditional pagewrap before group header / after group footer lines
- Rotatable table columns
- New print option dialog options
- New barcode: Aztec

16.1.2 User Interface
- New tool window "Table structure"
- Visibility of the table column separators in the rulers for easier adjustment
- Advanced line definition dialog: it is possible to hide single line definitions
- New toolbar controls in the preview
- Redesigned tree view icons
- Property dialogs for frames and formattings

16.2 New Functions/Options

16.2.1 DLL-API
- New functions:
  CMLL11.DLL:

LlDbAddTable()
LlDbAddTableRelation()
LlDbAddTableSortOrder()
LlDbSetMasterTable()
LlPrintDbGetCurrentTable()
LlPrintDbGetCurrentRelation()
LlPrintDbGetCurrentSortOrder()
LPrintlDbGetRootTableCount()
LlGetUsedIdentifiers()

CMLS11.DLL:

LsMaiJobOpen()
LsMailJobClose()
LsMailSetOptionString()
LsMailGetOptionString()
LsMailSendFile()

- New options:

  LL_OPTION_CALC_SUMVARS_ON_PARTIAL_LINES
  LL_OPTION_PROJECTBACKUP
  LL_OPTION_ERR_ON_FILENOTFOUND
  LL_OPTION_NOFAXVARS
  LL_OPTION_NOMAILVARS
  LL_OPTIONSTR_EXPORTS_ALLOWED_IN_PREVIEW
  LL_OPTIONSTR_HELPFILENAME
  LL_OPTIONSTR_NULLVALUE

16.3   Changed Functions/Options

16.3.1   .NET Component

- The functions LlPrintFields() and LlPrintFieldsEnd() return an "int" instead of a "bool". This change was necessary to support hierarchical table structures. If you simply want to port your projects, then follow the description in the next chapter.

17. Update Information for Version 10

17.1 Summary

17.1.1   General

- New Designer object: form control (edit control, combobox, checkbox or button)
- Totally renewed PDF export (font embedding, faster, less limitations)
- Preview control: direct export to PDF and other formats
- Preview control: send form data via HTTP or email in different formats
- Preview control: thumbnail bar switchable
- Emails can be sent via SMTP or MAPI, parameters can be set by code
- New preview controls (OCX/VCL/.NET)
- Standalone RTF inplace object, insertable into own projects
- New export type: TTY; sends text directly to dot-matrix printers
- Extended text export with layout
- Optional frame for text object
- Frames in tables can be assigned per cell
- New barcode formats (Data Matrix, PZN, Code 39 CRC, PIX, Royal Mail)
- Callback for print job supervision
- New Designer functions "RegExMatch$()", "Previous()"
- Project includes
- Stgsys-API only in LS-DLL
- New naming convention for DLL names

17.1.2   User Interface

- Optional Office 2003 Look & Feel
- More sizeable dialogs
- Line objects can be inserted horizontally and vertically by using the Shift key
- RTF editor supports zoom (requires at least RTF Version 3)

17.2 New Functions/Options

17.2.1   DLL-API

- New functions:
  CMLL10.DLL:

LlRTFEditorProhibitAction()
LlRTFEditorInvokeAction()
LlSetDefaultProjectParameter()
LlGetDefaultProjectParameter()
LlPrintSetProjectParameter()
LlPrintGetProjectParameter()

CMLS10.DLL:

LsSetDebug()
LsMailConfigurationDialog()
LlStgsysConvert()
LlStgsysGetJobOptionStringEx()
LlStgsysSetJobOptionStringEx()
LlStgsysGetPageOptionStringEx()
LlStgsysSetPageOptionStringEx()
LlStgsysStorageConvert()

- New options:

  LL_OPTION_ESC_CLOSES_PREVIEW
  LL_OPTIONSTR_PREVIEWFILENAME

- New callback:

  LL_INFO_PRINTJOBSUPERVISION

17.3 Changed Functions/Options

17.3.1 DLL-API

- The entire Stgsys-API now resides in the CMLS10.DLL and has been removed from the CMLL10.DLL
- The constants LL_STGSYS_... have been renamed as LS_... (ex.: LL_STGSYS_OPTION_CREATION -> LS_OPTION_CREATION)
- LlRTFEditObject has an additional parameter that switches the modal mode
- The recommended way to send export results by mail is using the project parameter API.

18. Update Information for Version 9

18.1 Summary

18.1.1   General

- Optional encryption of project files
- Changes in licensing (license structure itself, and setting of the license by an API call)
- New object type: OLE Container
- Supports page ranges and copies when printing from the preview
- Thumbnail view in the preview
- New export format: Excel
- New export format: Text
- New export format: TIFF/Multi-TIFF
- Group header lines can be forced to print directly below the header line
- Group footer lines can force a page wrap below them
- Nearly all object properties allow expressions
- New internal LL variables, for example to allow object placement depending on the paper size or printable area
- New tool windows for object list and object properties
- Standalone RTF Editor (new group of API calls)
- Rotation of RTF objects (Windows NT/2000/XP)
- RTF objects support text overflow in other RTF objects
- Support of MS FAX as export medium (Windows 2000/XP)
- Reduced size of the preview files up to 60%
- Enhanced .NET component, including user-definable functions and objects
- New event for print and design methods of the OCX and VCL. Print options can be set here, for example to cause an export without user interaction.

18.1.2   User Interface

- Office XP Look & Feel
- Dockable tool windows and toolbars, Tabstrips for multiple docked windows
- Help lines in the Designer with configurable snap width
- Table object: line definitions can now easily be exchanged and compressed
- Property window

18.2   New Functions/Options

18.2.1   DLL-API

- New functions:

    LlRTF...()   (API   calls   for   standalone   RTF   object)
    LlPrintGetRemainingSpace()
    LlGetPrinterFromPrinterFile()

- New options:

    LL_OPTION_UISTYLE
    LL_OPTION_NOFILEVERSIONUPDATEWARNING
    LL_OPTION_FONTPRECISION
    LL_OPTION_FONTQUALITY
    LL_OPTIONSTR_FAX...
    LL_OPTIONSTR_PROJECTPASSWORD
    LL_OPTIONSTR_LICENSINGINFO

19. Update Information for Version 8

The old expression mode is no longer supported.

19.1 Summary

19.1.1 General

- New object types: HTML, Chart
- New export formats: PDF, XML, MHTML
- New variable types LL_HTML , LL_NUMERIC_LOCALIZED and LL_DATE_LOCALIZED
- The if() and cond() functions have been optimized
- New internal Designer variable: "LL.OutputDevice". Contains the medium the project is being printed to.
- New Designer function *Hyperlink$()*
- *Empty()* function optionally applies implicit *ATrim$()*
- The names of table line definitions can be freely changed
- Each group header may trigger a page break
- The text object can have a background color
- Optional variation of character spacing in block-justified text
- Optimized preview file format, decreased file size
- Automatic backup copy when saving files in the Designer
- New compatibility option enabling Win NT-generated files containing barcodes to be read on Win9x/ME machines.
- Better resolution for inch system.
- Changed loading behavior of List & Label extension modules, see LL_OPTIONSTR_-LLXPATHLIST
- Support for new Windows 2000 file dialog styles
- Project sketch files can be colored, default is monochrome. See LL_OPTION_-SKETCH_COLORDEPTH
- Possible table line definitions increased to 100 per type
- The project file description in the file dialogs can be changed (LL_OPTIONSTR_-xxx_PRJDESCR)
- Optional: Japanese postal barcode (CM32L8BJ.LLX)
- Optional: Euro currency translation functions (CM32L8EU.LLX)
- Optional: new bitmap effect functions (Mask, Rotation, Black/White, Emboss) (CM32L8BM.LLX)

- The CM32CR8.dll is no longer required for print-only projects.

- The new coordinate system LL_INCH_DIV_1000 might cause your user objects to be able to deal with it. *LL_OPTION_UNITS* returns the current resolution, *LL_OPTION_METRICS* only returns whether the system is metric or not. Therefore, please check your use of these options. The maximum paper size in the inch/1000 resolution is restricted to approx. 83 cm on Win9x/ME systems.

19.1.2   Designer

- The Designer interface has been redesigned to provide increased user friendliness. In addition to the preview window, new Designer modes enable an editable preview.

- The zoom modes of the workspace and preview window can be changed independently of each other.

- The formula wizard has been equipped with many new features, such as auto completion, tool tips, parameter hint and syntax highlighting (not for MBCS/Unicode Version)

19.2 New Functions/Options

19.2.1   DLL-API

- New functions:

    LlDesignerProhibitFunction()
    LlSetNotificationCallbackExt()
    LlDefineChartFieldStart()
    LlDefineChartFieldExt()
    LlPrintDeclareChartRow()
    LlPrintGetChartObjectCount()
    LlPrintIsChartFieldUsed()
    LlGetChartFieldContents()
    LlEnumGetFirstChartField()

- New options:

LL_OPTION_INTERCHARSPACING
LL_OPTION_ALLOWMENUMANAGER
LL_OPTION_INCLUDEFONTDESCENT
 LL_OPTION_OFNDIALOG_NOPLACESBAR
LL_OPTION_SKETCH_COLORDEPTH
LL_OPTION_SKIPRETURNATENDOFRTF
LL_OPTIONSTR_MAILTO
LL_OPTIONSTR_MAILTO_CC
LL_OPTIONSTR_MAILTO_BCC
LL_OPTIONSTR_MAILTO_SUBJECT
LL_OPTIONSTR_SAVEAS_PATH
LL_OPTIONSTR_LABEL_PRJDESCR
LL_OPTIONSTR_CARD_PRJDESCR
LL_OPTIONSTR_LIST_PRJDESCR
LL_OPTIONSTR_LLFILEDESCR

- Changed options:

LL_OPTIONSTR_LLXPATHLIST   *new*   *logic*
LL_OPTION_MAXRTFVERSION = 0 prevents List & Label from loading RTF controls
LL_OPTION_UNITS: new 1/1000 inch unit

- New variable and field types:

LL_DATE_LOCALIZED
LL_NUMERIC_LOCALIZED
LL_HTML

20. Update Information for Version 7

20.1 Summary

20.1.1 General

- List & Label 7.0 is sold in two flavors: the standard SBCS version for Western code pages, which can optionally be enhanced to handle Far Eastern languages, and a Unicode version (please refer to the chapter on international use). All of these are capable of implementing an automatic word break according to the font's script language.

- Export to RTF, HTML, DIB und JPG

- More   integrated   barcodes:
  -              4   new   MSI   barcodes
  - MSI barcodes now also handle the full 0-9, A-F character range

- Optional module with the 2D barcodes PDF417 and Maxicode

- Enhanced   VCL   component   for   Delphi:
  -       integrated   data   binding   with   Master-Detail-Mode
  - Property and component editor (Designers can be called from within the IDE)

- Enhanced   OCX   control:
  -       Intellisense   (if   supported   by   the   IDE)
  - List & Label constants as ENUMs

- Additional   VB   control
  -                  with   source   code
  - integrated data binding

- Text objects can be bottom-aligned

- Pictures can be embedded in the project file

- The RTF object supports embedded objects and pictures

- Extended to support 50 table header, data, footer and group header and footer lines

- Virtually unlimited number of sum and user variables which can have names defined in the Designer

- New or modified formula functions: *LocCurr$()*, *LocCurrL$()*, *LocNumber$()*, *LocDate$()*, *LocTime$()*, *Locale$()*. New parameter for *Date$()* and *FStr$()*.

- Print   options   dialog
  -                  visually   enhanced
  - enhanced selection of output medium, default output medium can be preselected in the Designer

- File format of the label templates has changed

- A project file that is loaded in the Designer is locked against write access.

- While printing, the paper size is set to the project's page size if the printer is not set correctly (if the printer in the P-file is different or there is no P-file).

20.1.2   User Interface

- Color marks to better distinguish the different types of table lines
- Layer, variables and preview window are hidden when the Designer is not active
- Enhanced selection of frame to size or move a frame
- Enhanced formula wizard with three function groupings (function type, type of return value and type of first parameter) to help with finding a function.

- Text   objects:
  -                    Font   setting   is   faster
  -                    Bottom   aligned   option
  - Line distance in a paragraph can be selected
- New   LLVIEW7
  -        independent   of   the   viewer   OCX,   easier   registration
  - more languages

20.2   New Functions/Options

20.2.1   DLL-API

- New   functions:
  LlJobOpenLCID()
  LlPrintResetObjectStates()
  LlPrintResetProjectState()
  LlXSetParameter()
  LlXGetParameter ()

- Deleted   functions:
  LlPrintSelectFont()   (font   entries   in   structures   are   now   handles)
  LlSetDecimalChar() (implemented as OPTION)

- New   options:
  LL_OPTION_LCID
  LL_OPTION_CODEPAGE
  LL_OPTION_DEFDEFFONT
  LL_OPTION_NOTIFICATIONMESSAGEHWND
  LL_OPTION_IMMEDIATELASTPAGE
  LL_OPTION_COMPRESSRTF
  LL_OPTION_ALLOW_LLX_EXPORTERS
  LL_OPTION_SUPPORTS_PRNOPTSTR_EXPORT
  LL_OPTION_FORCEFONTCHARSET
  LL_OPTION_CALCSUMVARSONINVISIBLELINES
  LL_OPTION_NOFOOTERPAGEWRAP
  LL_OPTIONSTR_EXPORTS_AVAILABLE

LL_OPTIONSTR_EXPORTS_ALLOWED
LL_OPTIONSTR_DEFDEFFONT
LL_OPTIONSTR_EXPORTFILELIST
LL_OPTIONSTR_LLXPATHLIST
LL_OPTIONSTR_DECIMAL
LL_OPTIONSTR_THOUSAND
LL_OPTIONSTR_CURRENCY
LL_OPTIONSTR_SHORTDATEFORMAT
LL_PRNOPT_JOBID
LL_PRNOPTSTR_EXPORT
LL_PRNOPTSTR_EXPORTDESCR
LL_PRNOPT_PRINTJOBNAME

- Modified   options:
  LL_OPTION_MULTIPLETABLELINES   Defaults   to   TRUE
  LL_OPTION_TEXTQUOTEREPRESENTATIONCODE   Defaults   to   1
  LL_OPTION_PHANTOMSPACEREPRESENTATIONCODE   Defaults   to   2
  LL_OPTION_LOCKNEXTCHARREPRESENTATIONCODE Defaults to 3

- Deleted   options:
  LL_OPTION_FORCEMBCS (now set by ..._*CODEPAGE*)

- New   callbacks:
  LL_CMND_CHANGE_DCPROPERTIES_CREATE
  LL_CMND_CHANGE_DCPROPERTIES_DOC
  LL_CMND_CHANGE_DCPROPERTIES_PAGE
  LL_NTFY_EXPRERROR

- New   variable   and   field   types:
  LL_DATE_DMY
  LL_DATE_YMD
  LL_DATE_MDY
  LL_DATE_YYYYMMDD
  LL_BARCODE_MSI_10_CD
  LL_BARCODE_MSI_10_10
  LL_BARCODE_MSI_11_10
  LL_BARCODE_PDF417   (optional   module   required)
  LL_BARCODE_MAXICODE   (optional   module   required)
  LL_BARCODE_MAXICODE_UPS (optional module required)

- New   host   printer   commands:
  LL_PRN_GET_PAPERFORMAT
  LL_PRN_SET_PAPERFORMAT

- Structures   modified:
  scLlPrinter

20.2.2   STGAPI

- New   functions:
  LlStgsysPrint()
  LlStgsysPrintStorage()

21. Update Information for Version 6

21.1   Summary

21.1.1   General

- The names of the modules (EXE, DLL, OCX, VBX, LNG) have changed according to the version number. The same applies to the additional DLLs, please refer to the chapter "DLLs Required for the Program" at the beginning of this manual.

- The OCX control has been extended:
  - encapsulates nearly all functions of the List & Label DLL
  - contains a routine which implements the print loop for most kinds of print jobs
  - the function naming convention is now compatible with List & Label and the VCL control

- The VCL control has been extended:
  - encapsulates all functions of the List & Label DLL
  - contains a routine which implements the print loop for most kinds of print jobs
  - the function naming convention is now compatible with List & Label and the OCX control

- Automatic page wrap for tables and text objects, even for objects linked to tables

- The RTF object can wrap to multiple pages (32bit)

- Hierarchical variable and field lists ("Address.Name", "Address.Street", ...)

- RTF texts also in tables

- New variable type *LL_RTF* for direct selection in the RTF object's property dialog

- Date variables and fields can contain the time (as fraction of the day in the fractional part)

- Date variables and fields can be passed without offset calculation from Delphi, Basic and C

- Extended object link options (negative size fit, link to end) simplify design and programmatic approach for multi-page projects

- New output option: Print to file

- New or modified expression functions: *Continued(), Now(), AddDays(), AddHours(), AddMinutes(), AddSeconds(), Hour(), Minute(), Second(), RGB(), Min(), Max(),* extended parameters for *Date$()*, extended parameters for *FStr$()*, extended parameters for *WoY()*

- Some internal variables/fields have been renamed:
  - CountPageData   ->   LL.CountDataThisPage
  - CountAllData   ->   LL.CountData
  - CountPagePrintedData   ->   LL.CountPrintedDataThisPage

- CountAllPrintedRows   ->   LL.CountPrintedData
- FCountPageData   ->   LL.FCountDataThisPage
- FCountAllData   ->   LL.FCountData
- FCountPagePrintedData   ->   LL.FCountPrintedDataThisPage
- FCountAllPrintedRows   ->   LL.FCountPrintedData
(for compatibility, the old names are still recognized, but slower)

- Print   dialog
  -      improved   design
  - optional: user can choose the type of output media (Printer/File/Preview)

- Barcodes can be printed on pages larger than A4/letter

- Optional history of changes in project file: user and computer name (32 bit), date and time of creation and last change

- Optional history of changes in preview file: user, computer name, date and time of creation (32 bit)

- Barcode and drawing object contents can be calculated by an expression

21.1.2   Workspace

- Optional: new "Explorer" style in FileOpen/SaveAs dialogs

- Several improved dialogs

- Help button has new design

- New controls for color and pattern selection

- New dialog style for Office 98 "sliding" tool tips

- Extended   expression   wizard:
  -      multi-line
  - 32 bit: Drag&Drop from variable list and variable window
  - automatic insertion with an operator if needed
  - functions for managing bracket levels to support development of complex formulas

- Hierarchical variable list in separate window for Drag&Drop (32 bit)

  - onto workspace: creation of new objects
  - onto objects: insertion of new paragraph, table field, change of contents (depends on object type)
  - on text object property dialog: insertion of a paragraph
  - on table object dialog: insertion of a field
  - on expression wizard: insertion of the variable in the formula

- The right mouse button menu has been expanded:
  - editing of a single table field
  - editing of a single text paragraph
  - editing of a formula in a barcode or drawing object

- Modification of the cell width of single or multiple table fields using the mouse

- Insertion of fields into a table by Drag&Drop

- Barcodes (EAN8, EAN13xxx, DPIdent, DPLeit, GermanParcel, Postnet, FIM) can restrict the resizing to their respective allowed sizes.
- New functions in the preview:
  - Save a single page (32 bit, storage only)
  - Save the whole preview (32 bit, storage only)
  - Print a single page to a selectable printer
  - Print the whole preview to a selectable printer
- Enhanced LLVIEW7 (the independent viewer for preview files)
  - Thumbnail-style page preview
  - Dual language with auto-detection of the language, can also be selected manually

21.2 New Functions and Options

21.2.1   DLL-API

- *LlSetPrinterInPrinterFile()*

- *LlPrintSetOptionString()*

- *LlPrintGetOptionString()*

- *LlDebugOutput()*

- New flags for *LlPrintXXXStart()*: *LL_PRINT_FILE*, *LL_PRINT_USERSELECT*

- *LlSelectFileDlgTitleEx()* for *LlSelectFileDlgTitle()* and *LlSelectFileDlg()*: parameters changed

- *LlPrintSelectOffsetEx()* for *LlPrintSelectOffset()*: parameters changed

- New options:
  LL_OPTION_USEBARCODESIZES
  LL_OPTION_MAXRTFVERSION
  LL_OPTION_AUTOMULTIPAGE
  LL_OPTION_SETCREATIONINFO
  LL_OPTION_XLATVARNAMES
  LL_OPTION_SPACEOPTIMIZATION
  LL_OPTION_FORCEMBCS
  LL_OPTION_VARSCASESENSITIVE
  LL_OPTION_DELAYTABLEHEADER
  LL_OPTION_LANGUAGE
  LL_OPTION_PHANTOMSPACEREPRESENTATIONCODE
  LL_OPTION_LOCKNEXTCHARREPRESENTATIONCODE
  LL_OPTION_EXPRSEPREPRESENTATIONCODE
  LL_OPTION_DEFPRINTERINSTALLED
  LL_OPTION_PRINTDLG_DESTMASK
  LL_OPTION_PRINTDLG_DEST
  LL_OPTION_PRINTDLG_ONLYPRINTERCOPIES

- Modified options: *LL_OPTION_SUPPORTPAGEBREAK* defaults to TRUE *LL_OPTION_WIZ_FILENEW*: can be set by the user in the Designer, so the option no longer does anything.

- New variable/field types and subtypes: *LL_RTF*
LL_DATE_DELPHI1
LL_DATE_DELPHI
LL_DATE_MS
LL_DATE_OLE
LL_DATE_VFOXPRO

21.2.2   STGAPI

- New options for *LlStgsysGetJobOptionValue()*: *LL_STGSYS_OPTION_ISSTORAGE*

- New options for *LlStgsysGetPageOptionString()*: *LL_STGSYS_OPTION_CREATION*, *LL_STGSYS_OPTION_CREATIONAPP*, *LL_STGSYS_OPTION_CREATIONDLL*, *LL_STGSYS_OPTION_CREATIONUSER*

21.3 Concept Changes

The following functions are no longer supported (they might be included in the declaration file, but with no real functionality): *LlPrintCheckLineFit(), LlPrintBeginGroup(), LlPrintEnd-Group(), LIVB...(), LlPrintIntermediateTitle(), LlPrintHSeparator()*.

The print logic has changed: since version 6, List & Label has handled the complete page breaks on its own. Therefore, we cannot guarantee that all constructions that have been built with List & Label 5 will work correctly in all cases. The following tasks in particular should be solved by another means.

- Use of *Page()* in changing conditions for groupings to generate an intermediate title. Problems might occur here, when a data line causes a page break.

- Line height of 0 pt for statistics printout (take a look at the new Designer option from version 7).

Other items to note:

- *LlPrintGetRemainingItemsPerTable()* writes the data currently available in a buffer, so after calling this function data cannot be changed until the line has been printed.

- You may have to adjust paragraph or line spacing.

22. Update Information for Version 5

22.1 Summary

22.1.1   General

- Module names changed from LX to L5
- Preview print to one file which can be sent. This is now default!
- The preview management file has been renamed (from ".000" to ".LL")
- STGAPI: functions for managing this preview file
- SendTo mail function in preview
- Optional compression of the preview file
- Small changes in the format of the metafiles (no longer any SetViewportOrg()).
- 32-bit-Preview-ActiveX/OCX/COM/OLE-Control.
- Independent, small Preview-Viewer, uses the OCX mentioned above.
- LL_CMND_HOSTPRINTER
- New barcodes MSI-Plessey, CODE93, CODE11.
- New graphics formats JPEG, PCD.
- New options for LlSetOption() and LlGetOption().
- Combination of preview jobs into one file possible
- Initial preview zoom factor and window size
- New expression mode is default

22.1.2   Designer

- RTF control (32 bit only)
- New dialog style for Office 97 look-alike buttons
- Group footers
- Optional page break at first group header line
- Table object extended to 5 header, 20 footer, group and 30 data lines
- Wizard mode for new label and file card projects
- Import of projects possible

22.2 New Functions

22.2.1   DLL-API

- Stgsys functions for managing the preview file(s)

- LIPrintCopyPrinterConfiguration() for managing the printer configuration files, for example for temporary printer selection
- LIPreviewDisplayEx

22.3   The Expression Mode

The old expression mode is no longer supported in List & Label.

23. Help and Support

Many tips and tricks can be found in our knowledgebase at www.combit.com/knowledgebase. The knowledgebase will be updated regularly and more articles will be added - so it's worth taking a look!

Information on the support concept can be found at www.combit.com/support.

Requirements:

Before contacting us, please check the following points or obtain the required information:

- First, read the latest notes in the Service Pack's "What's new" PDF document. You can find it during the Service Pack installation or in the Service Pack download area at www.combit.com/servicepacks.

- Please also note the information in the "Self-help" PDF document. You can find this in the documentation directory of your List & Label installation or in the article "Create and Analyze a Log File" in our knowledgebase.

- For written inquiries, use the support form at www.combit.com/support-center.