



Rid Columns - do Install and Help instructions.

TelFormFactory - Quick Start

Carry out the following instructions. Follow links for more information. If the expected outcome does not occur follow Help link.

TelFormFactory in brief

TelFormFactory is an application to produce Java data input forms called TelForms which run on PC's, in Web Browsers and on Java Mobile devices. To produce the TelForm output TelFormFactory is used to produce an XML Schema - an international standard for defining data. The advantage of this is that Systems departments are already familiar with XML Schema so for business' integrated changes to Client-Server systems may be rapidly executed and rich client forms are available in seconds for your customers.

Start the TelFormFactory Application

It is assumed that TelFormFactory and Java Development Kit are correctly installed. If not see installation page.

The TFF application consists of

Menubar: The top menubar allows all TelFormFactory operations. Note the Keyboard shortcuts.

Toolbar: Below the menubar is a toolbar with icons for common functions.

Datatypes pages: The left side of the split-screen contains four 'pages' of Datatypes, from which the XML Schema is 'built'.

Messages: Top right of the TFF interface is a 'Messages' scroll-pane. This can be cleared from the menu and most messages are duplicated in TelFormFactoryLog.xml in the TFF directory.

TelForm Model: Below the messages screen is where the 'model' of the XML Schema is displayed, and can be built and edited. This resembles an inverted 'tree' with the 'root' at the top representing the TelForm and XML Schema document, and nodes below consisting of Datatypes which will be fields in the TelForm.

See for more detail.

TelForm data content design

TelFormFactory projects save information needed to re-create the XML Schema, and other information needed to reproduce TelForm Clients, and basic project management data, in a TelFormFactory file. This naturally conforms to an XML Schema, and is validated on opening.

Note that the TelFormFactory model does not affect the look or presentation of the client TelForm. It is involved with the Data structure and content. Some advanced options do affect the TelForm content, but the customer is allowed to choose colours, sounds and other preferences.

Demonstrating with AllTypesTelForm.xml

Under the 'File' menu, select 'Open TelFormFactory File' - choose the AllTypesTelForm.xml in the 'docs' folder in the TelFormFactory directory.

Expected outcome: The TelForm model will form consisting of all the TelFormFactory Datatypes on each page.

More information: TelFormFactory file corruption should be detected on opening and validation. Did you backup your data?

Save XML Schema

The XML Schema is the form that companies use to verify that the information is correct and that's the form they use to create the TelForm applets and midlets, the application that their customers fill in. You'd probably want to save that as say AllTypesTelForm.xsd. Save that.

Go to the XML Schema button, press that and it will ask you to save the name of the XML Schema. Save XML Schema as 'AllTypesTelForm.xsd'

Expected outcome: This will validate OK.

More information: If the TelForm model produced by *AllTypesTelForm.xml* has not changed then the schema should be valid. Ensure there is adequate disc space. Do you have Internet access? See for more detail.

Generate TelForm Clients

A Customer uses a Java PC or Mobile device to input data using a TelForm. TelFormFactory can produce TelForms which correspond to the current XML Schema:

The TelForm Application is stand-alone programme. The Java Archive or jar file has a main method which can be run by most Java Virtual Machines (also called JVM).

The TelForm Applet needs a web browser, such as Firefox, Internet Explorer & others. This also has a jar file very similar to the main, which runs inside a web page, also produced by TelFormFactory called index.html, along with supporting customised files. Depending on configuration web browsers may use different JVM.

The Java Midlet is for the mobile phone.

Select all clients, (Applet, Application and Midlet) and click on **Generate TelForms Out** and the 3 output processes progress bars are displayed as the different TelForms are generated. This should take less than 30 seconds.

Expected outcome: A Success message displaying time taken and output directory.

More information: See output messages and TelFormFactoryLog in case of problems. Rerun with debug enabled if required.

Exit TelFormFactory from the File menu, and confirm shutdown.

TelFormFactory output

In the TelFormFactory directory '**out**' is the TelForm output. Assuming 3 TelForm clients were selected there will be 3 directories for Java applet, (**applet**); application (**main**) and midlet (**midp1**) TelForms. The suffix indicates the Java version. Within each of the three directories **pub** directory, and optionally, a **src** directory.

Output directory contents

In the applet pub directory there is everything you need to run an applet. For the example AllTypesTelForm the following will be seen: The Java archive AllTypesTelForm.jar. A web page called index.html which the browser uses to run the jar file. token.css - a cascading style sheet for defining colours and so on for the web page. js2.js - a java script file which may be adapted to work with the Java file. Java and Javascript can complement each other well.

In the main pub directory is the AllTypesTelForm.jar which is the stand-alone desktop application.

The midp pub contains the midlet AllTypesTelForm.jar and AllTypesTelForm.jad which mobile Java devices use to run the jar. There is also a hidden file .htaccess to help some web servers.

Signing TelForms

Some PC Operating Systems, web browsers and Mobile devices may give security warnings for unrecognised software, or even prevent them running. By 'signing' your output with a digital signature your TelForm customers may be spared this confusion. In the TelFormFactory directory are 3 script files:

signer.bat for Microsoft Windows platforms.

signer for Unix & Linux platforms. You may need to chmod permissions.

signerMAC for MAC platforms.

Depending on your TelFormFactory platform - select the appropriate batch or shell file. This needs to be edited with your details and those of your Company, web domain and so on. Type **signer** (or signerMAC) from the command line which calls the batch file which digitally 'signs' those packages that have been generated. This is known as self-signing but the output may also be used to obtain commercial digital certificates.

For some platforms or systems it may be that no signature is better than an unrecognised issuer. By default the midlet jar is now not signed. Uncomment the lines in the signer batch file containing '**midp1**' to over-ride this.

See for opinions on current security issues.

Run TelForm clients

Run the 3 types of demonstration clients. See TelForm Client Guides for details:

TelFormPC_Guide.html. This covers applets and applications on desktop PCs.

TelFormMidp_guide.html This covers TelForm midlets on Mobiles.

Press autodata to fill fields with valid data and then test. The Server will reply that the data is valid. Also:-

For the main or stand-alone application a file dialogue will allow you to save the generated pdf file of your TelForm input.

The applet will respond with a link to the web location of the generated pdf file. Depending on your settings some browsers will open the pdf file in another page.

The midlet will send an email containing the generated pdf file. Available shortly.

In case of problems - rerun the Client with debug enabled. Ask your TelFormHost provider to check server logs.

Customise a new TelForm

Imagine the details needed to register a new Customer for your business:-

Open TelFormFactory. Click on the New TelForm button, acknowledge alert and enter say 'CustomerTelForm' as title. Enter summary Help information and 'OK'.

Drag new types from Datatype pages and add to root. For example:- Place cursor on xsd:string Datatype icon and drag on to root of TelForm. Name it as 'Given Name' . Press 'OK'. Enter 'Help' information. At the very least give an example, e.g. 'John'. Some cultures put family name before given name - how are you going to handle this? Add another xsd:string field called 'Family Name' . Do you add it to the root or the previous field? Add a tel:EmailFieldType field called 'Email' . In the 'Help' field explain that private, not work, email addresses are preferred. Add a tel:PhoneFieldType field called 'Phone' . Add more information in 'Help'. Add a xsd:integer field called 'Age' . Why would you not select 'xsd:decimal' field here? Where would you use a decimal? Add an tel:ExclusiveChoiceType named 'Sex' and tel:ExclusiveChoiceItem fields for 'Male' & 'Female' . Add a tel:MultipleChoiceType named 'Likes' and tel:MultipleChoiceItem fields for 'Chocolate' , 'Beer' , 'Cake' & 'Wine' . Optional: add more fields, perhaps within a 'tel:GROUP_HEADER'?

Menu: 'File', 'Save TelFormFactory File'.

'Save XML Schema' and 'Generate TelForm Clients' as for 'AllTypesTelForm' above.

Regular Expressions

Note: **xsd:string** will accept almost text. There is a powerful mechanism to use here called Regular Expressions. See

Editing TelForm

The XML Schema validator needs access to the XML Schema in order to validate data. This is in TelFormRootType properties. See [telformfactory_userguide.html](#) for more on this.

Click on any node (TelForm field) to edit its properties.

Right-click to delete a node. Confirm before deletion.

Don't forget to 'Save' the TelFormFactory file after amendment. Use 'Save As' to prevent overwrite.

TelFormFactory options

Change some preferences - Colours, Fonts, XSD validators and others.

Expected outcome: The changes have registered in Java Preferences and will be restored even after reboot.

TelFormFactory Weblog

Thanks for trying TelFormFactory.

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