

Simple techniques  
to publish live XML  
data for Navori QL

## INTRODUCTION

XML files are a great way to publish live data to your Navori QL screens. Navori QL's **Data Feed Manager** gives you full control over which parts of the XML file or RSS feeds you will show on your screens.

Of course, you can create and manage data feeds inside QL's Data Feed Manager. But what if you want the data to be managed by someone outside of your company? What if you want to post updates without having to use QL Manager at all? That's when XML comes into play.

This document will explore a few scenarios and describe techniques you can use to publish and manage external data directly to your Navori QL Player screens using XML.

## THE BASICS

XML stands for **EX**tensible **M**arkup **L**anguage. Essentially, XML was created to structure, store, and transport information. The XML format is similar to HTML in that you apply "tags" to your text with the exception that you invent your own tags. With HTML you can only use predefined tags.

Here is an example of a simple XML document:

```
<?xml version='1.0'?>
<channel>
  <item>
    <City>Toronto</City>
    <Morning> 3°</Morning>
    <Afternoon> 5°</Afternoon>
    <Image>http://www.mauricedoran.com/files/snow.png</Image>
  </item>
</channel>
```

As you can see, the concept is rather simple. The actual content to be displayed is contained between each tag (**<tag>text</tag>**) and you can pick any tag name that fit your needs.

Using the example above, QL's Data Feed Manager would read the XML file and show one column for each tagged entry. The more entries in the XML file, the more records will be shown on your QL Player screens. You just need to make sure you are consistent when typing your data in the XML file and close every tag.

It's easy to create an XML file from scratch. You can use Windows Notepad and type in the code yourself. The XML file can be edited at any time and if you publish it to a web server, Navori QL will pick up and display the content automatically.

This is the most efficient way to publish small lists of data outside of Navori QL itself.

In the following example you can see we added a few more records to our XML file.

```
<?xml version='1.0'?>
<channel>
  <item>
    <City>Toronto</City>
    <Morning> 3°</Morning>
    <Afternoon> 5°</Afternoon>
    <Image>http://www.mauricedoran.com/files/snow.png</Image>
  </item>
  <item>
    <City>Montreal</City>
    <Morning> 2°</Morning>
    <Afternoon> 4°</Afternoon>
    <Image>http://www.mauricedoran.com/files/showers.png</Image>
  </item>
  <item>
    <City>Ottawa</City>
    <Morning>-1°</Morning>
    <Afternoon> 0°</Afternoon>
    <Image>http://www.mauricedoran.com/files/sunshine.png</Image>
  </item>
</channel>
```

This is how the XML file looks once added to the Data Feed Manager:

The screenshot shows the 'FEED MANAGER' window for 'Canada Weather'. The table displays the following data:

	City	Morning	Afternoon	Image
1	Toronto	3°	5°	http://www.m
2	Montreal	2°	4°	http://www.m
3	Ottawa	-1°	0°	http://www.m

The interface also includes fields for URL, Type (RSS/XML Feed), Items (3), Refresh (00:30:00), Restrict Scope, Columns, Referent (City), and # Lines (1 - 3). Buttons for 'Ok' and 'Cancel' are at the bottom.

*The Data Feed Manager lists the contents between the XML tags. The tag names become the headers and the contents between the tags are listed in each column.*

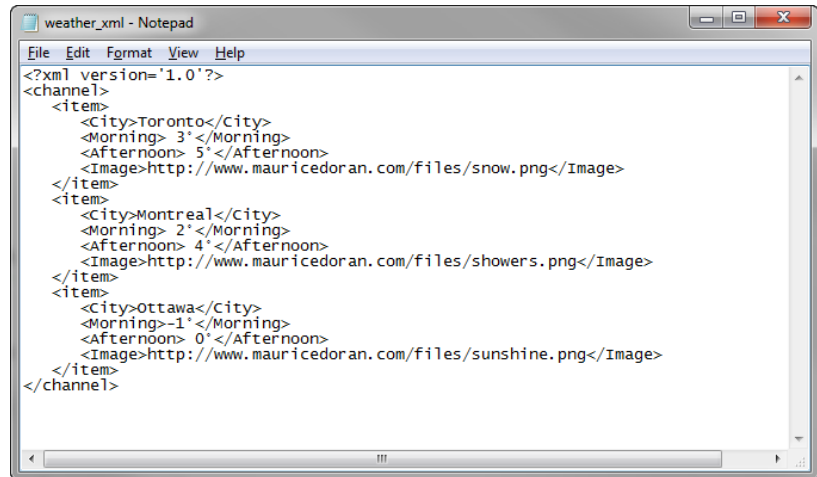
*You may edit the content or add new records then re-publish the XML file to your web server and the updates will be picked up by each QL Player automatically.*

## CREATING AND EDITING XML FILES

As I mentioned earlier, the simplest way to prepare XML files from scratch is to use **Windows Notepad**. By writing your content from scratch and keeping the code simple you will get excellent results with Navori QL. Just be sure to close every tag otherwise your XML file will be invalid.

In this example, each record is made up of the following information:

- **City:** the name of the city in this forecast.
- **Morning:** morning temperature.
- **Afternoon:** afternoon temperature.
- **Image:** link to an image file stored on a web server.



```

weather_xml - Notepad
File Edit Format View Help
<?xml version='1.0'?>
<channel>
  <item>
    <City>Toronto</City>
    <Morning> 3'</Morning>
    <Afternoon> 5'</Afternoon>
    <Image>http://www.mauricedoran.com/files/snow.png</Image>
  </item>
  <item>
    <City>Montreal</City>
    <Morning> 2'</Morning>
    <Afternoon> 4'</Afternoon>
    <Image>http://www.mauricedoran.com/files/showers.png</Image>
  </item>
  <item>
    <City>Ottawa</City>
    <Morning>-1'</Morning>
    <Afternoon> 0'</Afternoon>
    <Image>http://www.mauricedoran.com/files/sunshine.png</Image>
  </item>
</channel>

```

The “Item” tag is used to delimit each record in the XML file and we open and close the file with the “Channel” tag. You don’t have to call these tags Item or Channel. You can pick your own words.

Don’t forget the entry at the top of the file... the question marks at the beginning and end of this tag indicate this is a comment and it states the XML version used in this file.

Now, you don’t have to use these same tag names. You can make up your own and if you follow this basic structure, you will end up with a valid XML file.

## OTHER OPTIONS

There are many software applications that can export content to the XML format. However, you may end up having to “clean-up” the resulting files if the XML code contains a lot of extra code and information that cannot be easily parsed. Often, importing these XML files in Navori QL will produce an error or the data will not look right in the Data Feed Manager.

For example, you cannot just save a Microsoft Word or Excel document in the XML format. You must tell Word or Excel how to parse the document’s content.

With Microsoft Word, you must create the document using a special type of style sheet which will be used to apply valid XML tags to each block of text. Excel has its own issues... It requires an XML Map so it can parse the data in your spreadsheet and apply proper XML tags.

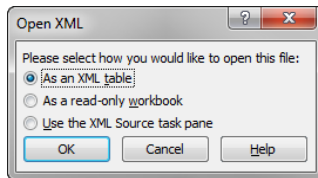
If you plan to use Word or Excel to create content that will ultimately be published in XML format, you need to plan your document structure and create the required supporting material in advance. Otherwise you will end up with XML files that cannot be displayed in Navori QL.

Here is a quick conversion process for Excel users...

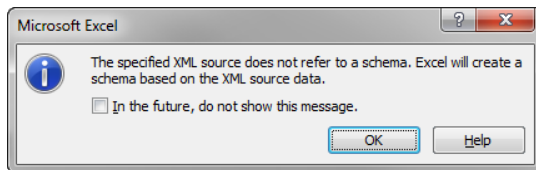
To prepare an Excel file that can host and output simple XML data for your screens, proceed as follows:

1. Begin by creating a quick XML file like we did above in Microsoft Notepad.
2. Next, launch Excel and open the XML file.

You will see this window pop-up:

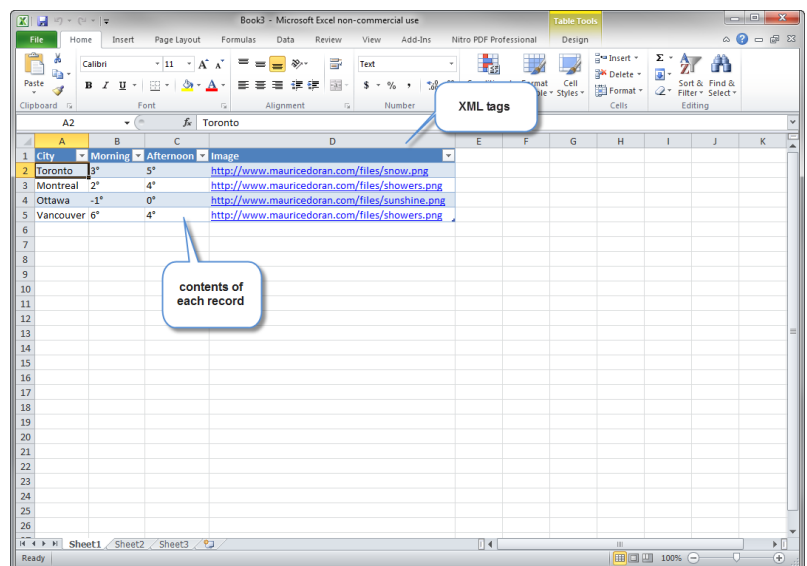


3. Select the first option and click **OK**.
4. You will see this window pop-up:



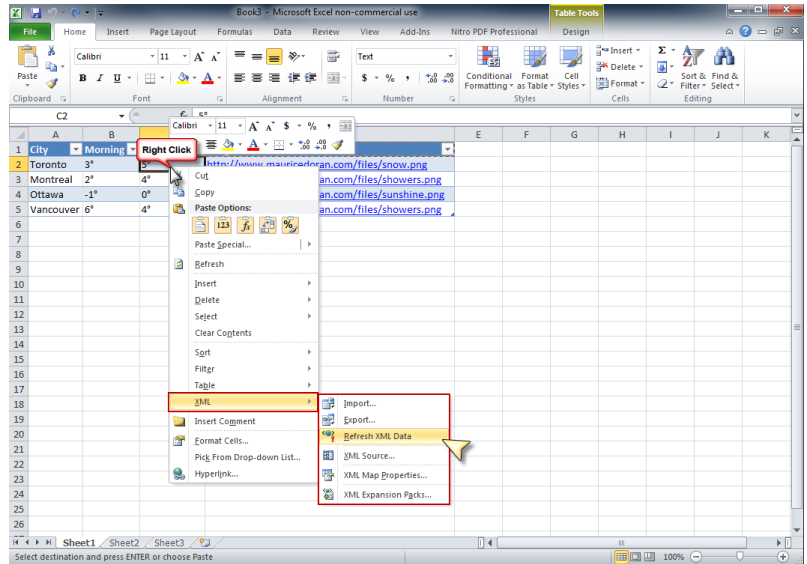
5. Select **OK**. This will create a new “schema” which is basically a map that tells Excel how to deal with the contents of the XML file.

A new spreadsheet will be created and the contents of the XML file will be displayed like this:



6. You may now copy/paste, add new records (rows), etc... and you can access additional XML functionality by right clicking in any cell and selecting the XML menu.

In the example on the right, we can see several options under the XML menu. We can import, export and refresh the data in the external XML file.



We can also look at the properties of the XML code if we want to.

7. The resulting XML code will have a few more comments at the beginning of the file but this will have no effect on Navori QL's ability to read the file.

Here are the results:

```

weather_xml2 - Notepad
File Edit Format View Help
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<channel xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <item>
    <City>Toronto</City>
    <Morning>3°</Morning>
    <Afternoon>5°</Afternoon>
    <Image>http://www.mauricedoran.com/files/snow.png</Image>
  </item>
  <item>
    <City>Montreal</City>
    <Morning>2°</Morning>
    <Afternoon>4°</Afternoon>
    <Image>http://www.mauricedoran.com/files/showers.png</Image>
  </item>
  <item>
    <City>ottawa</City>
    <Morning>-1°</Morning>
    <Afternoon>0°</Afternoon>
    <Image>http://www.mauricedoran.com/files/sunshine.png</Image>
  </item>
  <item>
    <City>vancouver</City>
    <Morning>6°</Morning>
    <Afternoon>4°</Afternoon>
    <Image>http://www.mauricedoran.com/files/showers.png</Image>
  </item>
</channel>

```

This is a great way to manage a lot of XML data without having to write the entire file in Microsoft Notepad. You can concentrate on the content without having to worry about the coding.

## ENTERPRISE CLASS DATA CONVERTERS

If you require an automated data conversion process, you should consider the Data Synchronisation Studio from [Simego](#). This is a software solution that can translate and synchronize data from most enterprise class applications including: Access, Excel, MS-SQL Server, MS Exchange Server, MS SharePoint Server, Oracle databases, MySQL and more... Data can be extracted from these sources and saved as valid XML files for use with Navori QL.

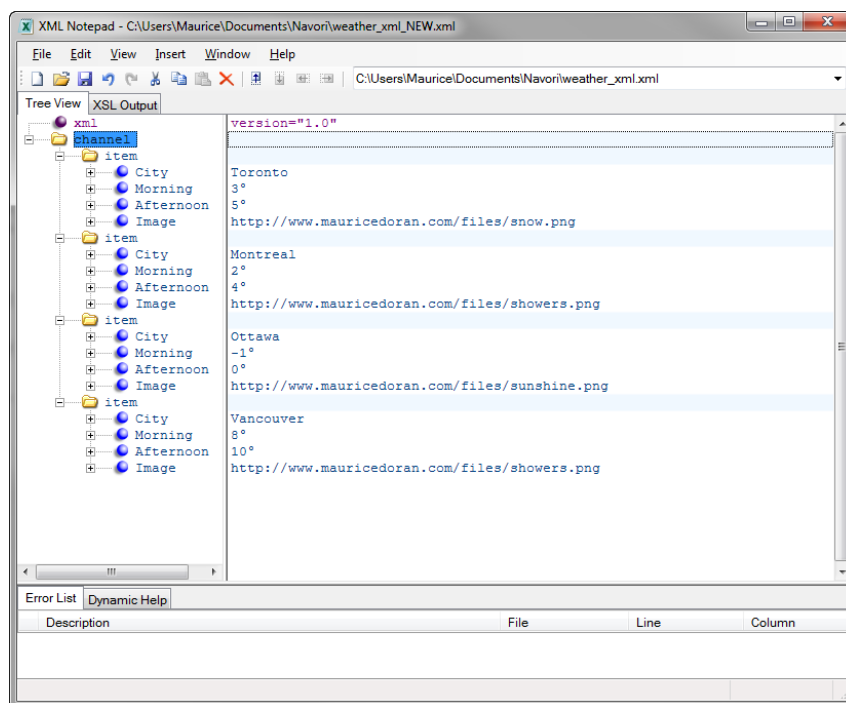
## FREE TOOLS YOU CAN USE

Let's say you have simple needs that don't require a solution like the one we just described above.

If you don't want to use Excel or if you find Notepad is too much work, you have other options.

There are many software applications that are designed specifically for authoring and editing XML files. One such product is the [Microsoft XML Notepad](#) which is freely available from [this link](#).

Here is how our Weather XML file looks in XML Notepad (note that I added a new record for Vancouver in this example):



You can create and edit any XML file with this application and the results are fully compatible with Navori QL. Many XML editors on the web are designed for technical users that need to create and manipulate large and complex XML databases. I suggest sticking with the ones listed here to get the best results for most simple data feeds.

## PUBLISHING YOUR DATA

Making your XML data available to Navori QL requires two things:

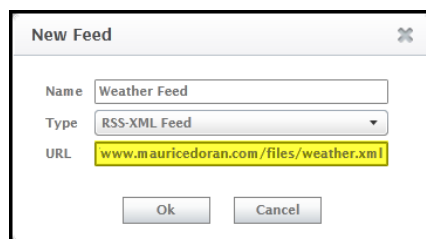
1. An XML file.
2. A web server.

To publish and update your data feed online, you must save your XML file to a web server (any web server will do).

Next, you must capture the URL that points to the file.

For example: <http://www.mauricedoran.com/files/weather.xml>

This is the URL that you will enter in QL's Data Feed Manager:



Once you configured your new XML feed in QL, you can add the fields to your templates or tickers. To update the contents of these feeds, you update the original XML file on your local PC and then upload it to your web server (overwriting the old file). Your QL Players will load the new content automatically.

## ALTERNATE PUBLISHING METHODS

Let's say you are managing more than one or two XML data files and you want to automate the update process. I recommend you look at one of the many FTP synchronization tools available on the web.

For example, [this free program](#) will let you synchronize the contents of a local folder on your PC with a folder on your web server via FTP. Configuring the **FTPSync** application requires a bit of work so you should be familiar with editing Windows INI files (see the application's [online user manual](#) for details).

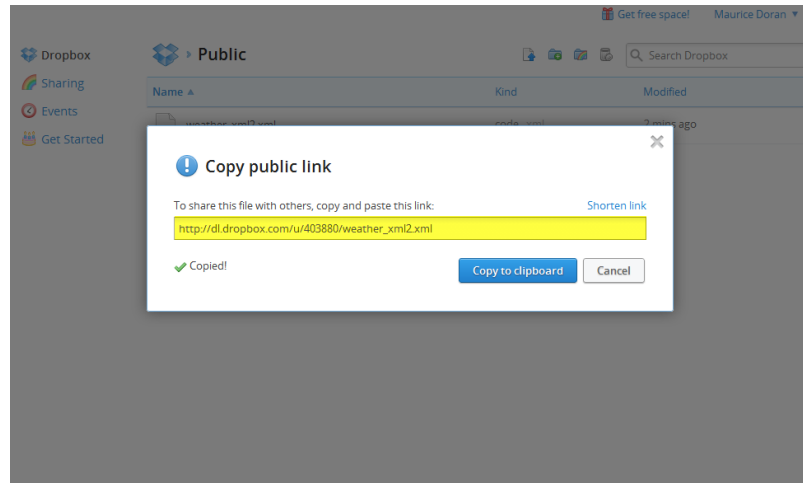


Once the application is configured and running you just edit the XML files on your local folder and FTP Sync will automatically replace the old versions on your FTP/Web Server.

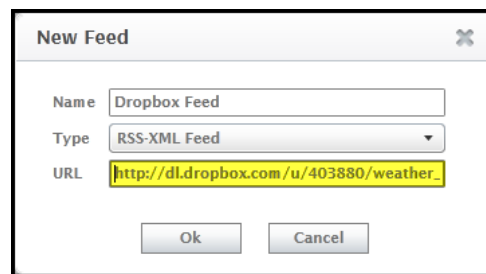
But let's say you don't want to mess with configuring applications or if you don't have access to a web server to publish your XML data. What then?

Well, you can use the popular Dropbox service. You only need the basic, free account to set this up.

Once you have set up your account, save a copy of your XML files in the **Public** folder and make sure the files are shared. Next, copy the direct link to your Windows Clipboard.



And paste the URL in the QL Data Feed Manager:



From this point forward, you can edit the XML files in your local PC's Dropbox\Public folder and the changes will automatically be uploaded to **Dropbox**, updating the information on your Player's screens.

I think this method will also work for users of **Box.net** (NOTE: Only paid accounts provide direct links to shared files. The free account will not work for this purpose). I also tested the **MediaFire** service and found it does not work for this purpose.

In my opinion your best bet is still Dropbox since it's a free service and there is nothing to install or configure.

## POTENTIAL USES

XML is a great format if you need to publish data from outside your digital signage application. No need to give QL Server access to the person who is tasked with managing the data itself. They just edit and publish the XML files as often as needed.

XML is ideal for these types of applications:

- ✓ **Restaurants** – Edit and update menu items, prices and product photographs online in one or more XML files that are published to your digital menu boards.
- ✓ **Hotels/Convention Centers** – Publish hotel activities and announcements from a single XML file or synchronize updates from the hotel’s reservation system using the Semego data synchronization tool.
- ✓ **Factories** – Extract production data from your servers and convert the data to XML for publication.
- ✓ **Call Centers** – Publish daily call and sales statistics using XML.
- ✓ **Corporate Offices** – Create a virtual bulletin board and publish notices via XML. Maintain a list of visitors in an XML file that you publish on your lobby screens.
- ✓ **Warehouses/Courier Pick-Up Centers** – Maintain a list of deliveries in XML that you publish to your screens.
- ✓ **Automobile Dealerships** – Post customer repair notices, promotions, dealership news all stored in XML files.
- ✓ **Gyms** – Publish a list of daily activities and promotions from a single XML file.

Remember that you don’t always need to grant access to your Navori QL system. If a person only needs to update specific data in text form, consider using XML. This technique separates data updates from screen management.

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