



# FlipFactory®

## GENERATING JOB REPORTS

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This  
App Note  
applies to  
versions  
5.1 & later



# Introduction

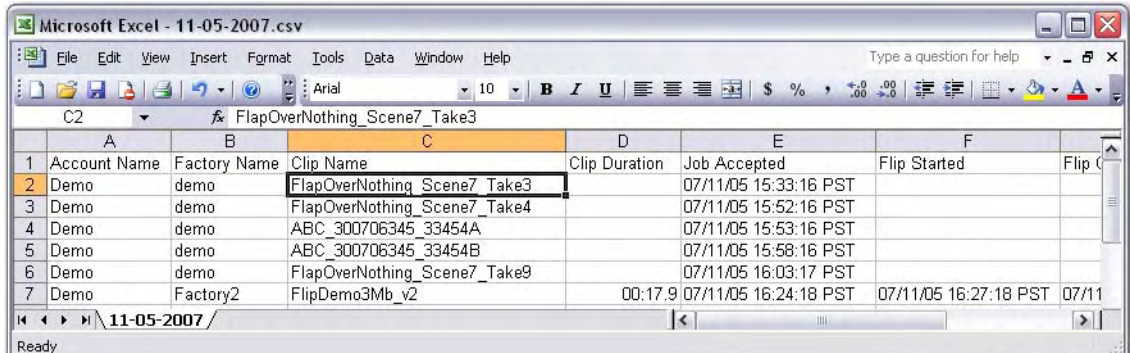
FlipFactory with MetaFlip enables you to capture and report details about jobs that are processed in FlipFactory. FlipFactory stores the results of each job in a comma-separated file you can open, read and use in Microsoft Excel, for example. FlipFactory reporting is part of FlipFactory's MetaFlip option.

Making detailed job processing information available in a spreadsheet file provides easy auditing and logging archives, better job review and analysis, easy data graphing and more sophisticated reporting features by factory for your users and managers.

FlipFactory job reporting produces reports in text files known as CSV files (for Comma Separated Value). Each line (or row) in the file represents a job that has been processed by FlipFactory. The contents of each line are created from the job message (MDML).

To convert each job message into a line in the CSV file, FlipFactory uses XSL stylesheets, which are XML transformation instructions from the job message (an XML file), to a line of text. You can customize which fields are extracted and added to the report row to suit your needs. You can produce a new report file each month, each day, each hour, or many other time interval options.

**Figure 1. FlipFactory report files can be viewed and processed in Microsoft Excel.**



The screenshot shows a Microsoft Excel window titled "Microsoft Excel - 11-05-2007.csv". The spreadsheet contains the following data:

	A	B	C	D	E	F	G
1	Account Name	Factory Name	Clip Name	Clip Duration	Job Accepted	Flip Started	Flip C
2	Demo	demo	FlapOverNothing_Scene7_Take3		07/11/05 15:33:16 PST		
3	Demo	demo	FlapOverNothing_Scene7_Take4		07/11/05 15:52:16 PST		
4	Demo	demo	ABC_300706345_33454A		07/11/05 15:53:16 PST		
5	Demo	demo	ABC_300706345_33454B		07/11/05 15:58:16 PST		
6	Demo	demo	FlapOverNothing_Scene7_Take9		07/11/05 16:03:17 PST		
7	Demo	Factory2	FlipDemo3Mb_v2	00:17.9	07/11/05 16:24:18 PST	07/11/05 16:27:18 PST	07/11

FlipFactory provides sample stylesheets to produce the report displayed above. Some of these job details are also displayed in the System and Job Status windows. You can customize each report by editing the stylesheet to delete (see [Removing a Column from a Report on page 9](#)) or add new columns (see [Adding a Column to a Report on page 9](#)). To add columns, you extract additional details from the job MDML message and include them in the report.

**Note:** *To enable reporting in a factory, just add an XSL Transform to your factory using the appropriate stylesheet. You can change reports by factory or copy the XSL Transform to all of your factories so they each add jobs to the same file. Or, you can create a report for all Traffic factories, for example, then copy it into the Notify folder of your Traffic factories.*

## Obtaining MetaFlip

If you don't have the XSL Transform in the Notify section of your factories, or you cannot select it and display its editor panel, then you are not currently licensed for MetaFlip. Please contact Telestream for details on how to obtain a MetaFlip license, and download/installation instructions.

If you are missing the CSV.xsl stylesheet, please make sure that you have the latest version of FlipFactory installed, with all appropriate Update packs. For assistance, contact Telestream Customer Service.

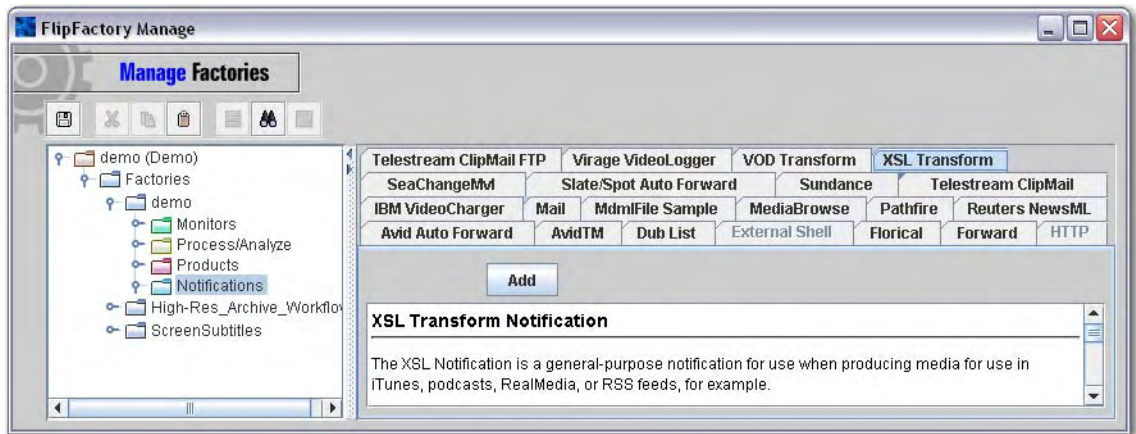
# Enabling Job Reporting in a Factory

Its easy to add reporting to any factory. First, make sure that MetaFlip is enabled in your FlipFactory server and the appropriate update pack has been installed.

To enable job reporting, follow these steps:

1. Add a new XSL Transform Notify to your factory.  
In Manage Factories, open the factory and click Notifications to display the Notifications enabler panel.
2. Click XSL Transform and click Add.

**Figure 2. Add an XSL Transform to a factory and configure it to implement job reporting.**

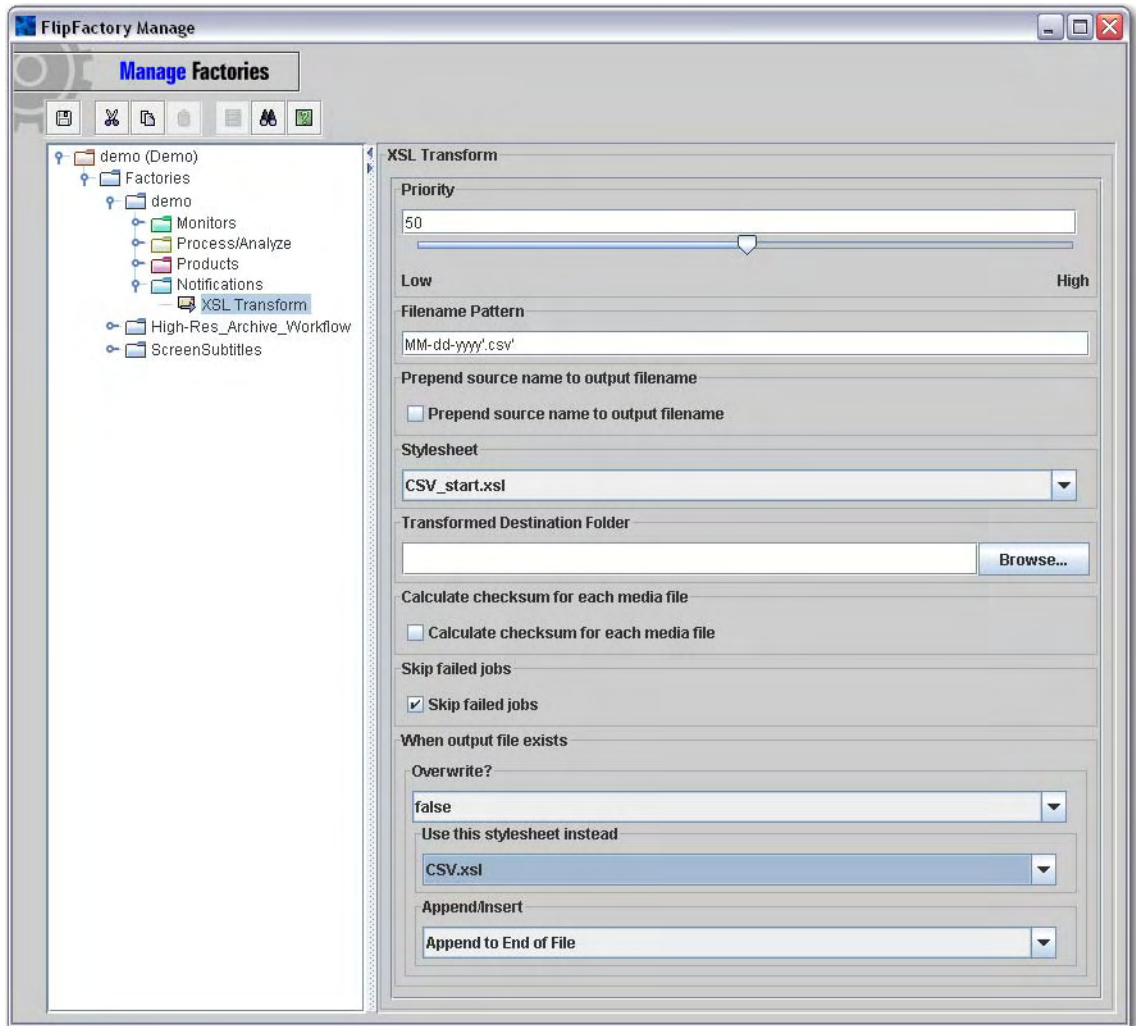


**Note:** You must add a new Notify and configure it to enable reporting. Existing notifies that you've added previously are already configured to perform other tasks, such as producing iPod metadata XML files, for example.

FlipFactory adds the XSL Transform notify and displays it in the Notifications folder in the factory you're working on.

3. Click the new XSL Transform to display it's editor panel:

Figure 3. Use the XSL Transform editor panel to configure job reporting.



4. Adjust these XSL Transform settings to configure job reporting according to your requirements (see online help in the editor panel for details).

**Note:** To ensure that your FlipFactory has job reporting enabled, click the Stylesheet dropdown menu. If *CSV\_start.xsl* is listed, the option is installed. If not, resolve the problem by contacting your support organization or Telestream Customer Service before continuing.

**Filename Pattern.** The Filename Pattern can be specified to generate a new report at regular time-based intervals (daily, for example) and add all of the jobs that have been run during this time period to the end of the existing report file. That is, the first job at the beginning of the time period (in this example, a day) creates a new file, and each succeeding job in the same time period adds a new row to the report file.

To create a report file pattern that generates a new file each day, enter *MM-dd-yyyy.csv* – where the operative parameter is the ‘dd’ element in the syntax. (The ‘.csv’ suffix permits applications including Microsoft Excel to automatically open this text file, which is in comma-delimited format.) Using this example, the first job on January 9, 2007 generates a file named *01-09-2007.csv*.

You can adjust this filename pattern to auto-generate monthly, yearly, or every day, week, month, or year (plus other time-based intervals) by modifying the MM-dd-yyyy (pattern) portion of the

filename value. For example, to auto-generate a monthly report file, enter *MM-yyyy.csv*. Note the single quotes around the string portion of the filename value. Continuing the example: The first job in March, 2007 creates a file named *03-2007.csv*. If the file pattern is *MMMM-yy.csv*, the resulting file is *March-07.csv*.

Further, you can prepend the pattern with a literal, to provide a more unique and explanatory name. For example, you can specify *'Traffic-MM-dd-yy.csv'* to obtain *Traffic-03-07.csv* on March 3, 2007, for example.

**Note:** For details (including setting up hourly reports), see online help on the XSL Transform Notify editor panel. For more configuration options, refer to <http://java.sun.com/j2se/1.4.2/docs/api/java/text/SimpleDateFormat.html>.

**Stylesheet.** Select the *CSV\_start.xsl* file to perform transformation (by processing each job's MDML message and extract selected details) and write the output to the file. *CSV\_Start* creates a header row at the top of the report. If you do not want a header row in the file, just select *CSV.xsl*.

**Transformed Destination Folder.** Click Browse to navigate to and select the folder where you want the report files stored.

**Skip Failed Jobs.** Check if you only want jobs that complete normally to be added to the report file. If you want all jobs listed in the report, uncheck this option.

#### **When Output File Exists Options**

Select *false* from the **Overwrite** dropdown menu, so that the first of the selected time interval writes a new file, but subsequent jobs in the same interval add their job details to the file written by the first job.

**Use this Stylesheet Instead.** Select *CSV.xsl* to write out all subsequent job details without first writing a header row.

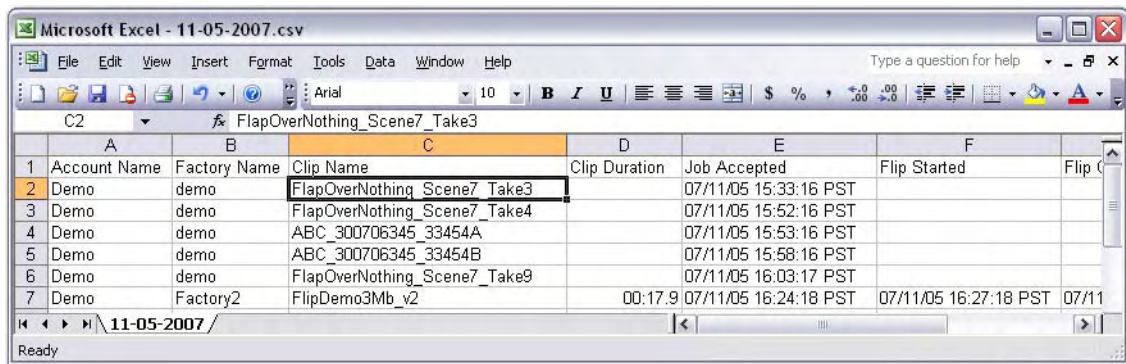
**Append/Insert.** Select Append to end of file for report processing.

# Viewing Job Reports

You can view, edit, and operate on the job details data by opening the reporting file in any text processor, including Notepad. Typically, Microsoft Excel is used. Excel provides excellent viewing and analysis and reporting features for data structured in this column-oriented format:

To open a report file in Excel, double-click the .csv report file you want to view. Or, in Excel select File > Open. Select Text Files from the Files of Type dropdown menu at the bottom of the Open dialog/ Navigate to the folder where you are saving the report files and select the file to open and click Open.

**Figure 4. You can view job report files in Microsoft Excel and other text processors.**



The screenshot shows a Microsoft Excel window titled "Microsoft Excel - 11-05-2007.csv". The spreadsheet contains the following data:

	A	B	C	D	E	F	G
1	Account Name	Factory Name	Clip Name	Clip Duration	Job Accepted	Flip Started	Flip
2	Demo	demo	FlapOverNothing_Scene7_Take3		07/11/05 15:33:16 PST		
3	Demo	demo	FlapOverNothing_Scene7_Take4		07/11/05 15:52:16 PST		
4	Demo	demo	ABC_300706345_33454A		07/11/05 15:53:16 PST		
5	Demo	demo	ABC_300706345_33454B		07/11/05 15:58:16 PST		
6	Demo	demo	FlapOverNothing_Scene7_Take9		07/11/05 16:03:17 PST		
7	Demo	Factory2	FlipDemo3Mb_v2	00:17.9	07/11/05 16:24:18 PST	07/11/05 16:27:18 PST	07/11

The column headers (if in the report file) display in row 1; detail rows (one for each job in this file) display in row 2 and subsequent rows. Expand the rows to see all of the text in each column as necessary.

You can use to Excel to sort the jobs by column. You can also use Excel to search for specific jobs by searching for specific data. You can also perform calculations on the data, for example, you can calculate the total flip time by summarizing the Clip Duration or determine the number of jobs by counting the number of details rows.

In addition to using Excel to view and analyze these job reports, you can import the details into a database, copy and paste them into other reports, or import them into specialized reporting or analysis programs for further processing.

# Customizing FlipFactory Job Reports

The CSV\_start and CSV stylesheet (XSLT) files are configuration files that control how column data is obtained, and which columns and column headers are saved in the CSV file.

The default columns are:

ACCOUNT NAME  
FACTORY NAME  
FILE NAME  
DURATION  
TIME COMPLETED  
SUCCESS/FAILURE

Report columns can be customized to meet your reporting requirements by editing the stylesheet in a text editor such as Notepad. Telestream recommends duplicating and renaming both configuration files (CSV\_start and CSV) to use as customized stylesheets for your own requirements. For purposes of clarity, the names *CSV\_Start* and *CSV* are used in the following sections when referring to customizable stylesheets.

**Note:** *Customizing stylesheets should be performed by persons with a basic understanding of XML and XSL, and FlipFactory MDML message structure.*

*To obtain a sample MDML job message, add an MDML File Sample Notify to your factory and process a job. FlipFactory writes the MDML xml file to the destination directory you specify, so that you can open and inspect the file for data to extract.*

These stylesheets must be stored in the following directory:

<InstallDrive>:\Program Files\Telestream\FliFactory\http\metadata\stylesheets

**Note:** *When you add a new stylesheet to this directory, you must re-start FlipFactory in order for the stylesheet to display in the XSL Transform editor panel's Stylesheet dropdown menu.*

## CSV\_Start Stylesheet

The purpose of the CSV\_Start stylesheet is to output the column head text and execute the CSV stylesheet. The CSV\_Start stylesheet should be specified in the Stylesheet field of the XSL Notify editor panel, when you want to place the column headers in a new report file (the first time it is created). Then, choose OverWrite false, and select CSV.XSL in the Use This Stylesheet Instead field to only use this stylesheet for existing report files.

```
<?xml version="1.0" encoding="UTF-8"?>
<xsl:stylesheet xmlns:xsl="http://www.w3.org/1999/XSL/Transform" version="1.0">
<xsl:import href="http://localhost:9000/metadata/stylesheets/CSV.xml"/>
<xsl:output method="text"/>
  <xsl:template match="message">
    <!-- The text element below contains the column header text -->
    <!-- There must be a comma between each column text -->
    <xsl:text>Account Name,Factory Name,Clip Name,Clip Duration,Job
Accepted,Flip Started,Flip Completed,Job Completed,Success/Failure</xsl:text>
    <xsl:text>&#10;</xsl:text>
    <xsl:call-template name="rows"/>
  </xsl:template>
</xsl:stylesheet>
```

The text element (shown in bold text, above) is the text for the column heads in the report. Edit this element to add or remove column heads.

## CSV Stylesheet

The purpose of the CSV stylesheet is to extract data from each job's MDML message and format and output the column data itself into the report file.

```
<?xml version="1.0" encoding="UTF-8"?>
  <xsl:stylesheet xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
    version="1.0">
    <xsl:output method="text" />
    <xsl:template match="message">
      <xsl:call-template name="rows" />
    </xsl:template>
    <xsl:template name="rows">
      <xsl:for-each select="parcel/content">
        <xsl:call-template name="row">
          <xsl:with-param name="num"><xsl:value-of
            select="position()" /></xsl:with-param>
        </xsl:call-template>
      </xsl:for-each>
    </xsl:template>
    <xsl:template name="row">
      <xsl:param name="num" />
      <xsl:value-of select="/message/envelope/to/account/@personal" />
      <xsl:text>,</xsl:text>
      <xsl:value-of select="/message/envelope/to/account/factory/@name" />
      <xsl:text>,</xsl:text>
      <xsl:value-of select="@name" />
      <xsl:text>,</xsl:text>
      <xsl:value-of select="@duration" />
      <xsl:text>,</xsl:text>
      <xsl:value-of select="/message/status/action[1]/@occured" />
      <xsl:text>,</xsl:text>
      <xsl:value-of select="/message/status/action[@type='translate']/" />
      <xsl:value-of select="/message/status/action[@type='translate']/" />
      <xsl:value-of select="session[position()=$num]/@started" />
      <xsl:text>,</xsl:text>
      <xsl:value-of select="/message/status/action[@type='translate']/" />
      <xsl:value-of select="session[position()=$num]/@completed" />
      <xsl:text>,</xsl:text>
      <xsl:value-of select="/message/status/action[last()]/@occured" />
      <xsl:text>,</xsl:text>
      <xsl:call-template name="result" />
      <xsl:text>&#10;</xsl:text>
    </xsl:template>
    <xsl:template name="result">
      <xsl:choose>
        <xsl:when test="/message/status/failure">
          <xsl:text>Failed during </xsl:text>
          <xsl:value-of select="/message/status/failure/@type" />
          <xsl:text>: </xsl:text>
          <xsl:value-of select="/message/status/failure" />
        </xsl:when>
        <xsl:otherwise>
          <xsl:text>Success</xsl:text>
        </xsl:otherwise>
      </xsl:choose>
    </xsl:template>
  </xsl:stylesheet>
```



## Removing a Column from a Report

Open the *CSV.xml* file and remove the value-of and text elements (the row and comma entry) that you want removed from the report. (There is no comma element on the last row, of course.)

For example, to delete the Flip Completed column, delete these two elements:

```
<xsl:value-of select="/message/status/action[@type='translate']/
    session[position()=$num]/@completed"/>
<xsl:text>,</xsl:text>
```

If you are using report headings, open the *CVS\_start.xml* file and remove the header row text (and following comma except for last column) for the column that you have removed.

Continuing the example – this element is the default element without changes in *CSV\_start.xml*:

```
<xsl:text>Account Name,Factory Name,Clip Name,Clip Duration,Job
Accepted,Flip Started,Flip Completed,Job Completed,Success/Failure</xsl:text>
```

This element is the default element with the “Job Completed,” text removed from the heading:

```
<xsl:text>Account Name,Factory Name,Clip Name,Clip Duration,Job
Accepted,Flip Started,Job Completed,Success/Failure</xsl:text>
```

Save both files to enable the changes you’ve made.

## Adding a Column to a Report

Virtually any element in the MDML message of the job can be added as a column to your reports. To add a column, add new row (and comma, on all but last) elements in *CSV.xml*. If you’re using the header option, add the column heading text to the text element in *CSV\_start.xml*.

For example, to add the FlipFactory store name to the report as column No. 2 (right after the name of the account and prior to the factory name), add the two elements (shown in bold text) immediately following the value-of element for personal (and the comma element):

```
<xsl:value-of select="/message/envelope/to/account/@personal"/>
<xsl:text>,</xsl:text>
<!-- These two elements add the new column for store name -->
<xsl:value-of select="store/@name"/>
<xsl:text>,</xsl:text>
```

If you are using report headings, open the *CVS\_start.xml* file and add the header row text and following comma for the column that you have added.

This element is the default element without changes in *CSV\_start.xml*:

```
<xsl:text>Account Name,Factory Name,Clip Name,Clip Duration,Job
Accepted,Flip Started,Flip Completed,Job Completed,Success/Failure</xsl:text>
```

This element is the default element with the “Store Name,” text added to the heading:

```
<xsl:text>Account Name,Store Name,Factory Name,Clip Name,Clip
Duration,Job Accepted,Flip Started,Flip Completed, Job Completed,Success/
Failure</xsl:text>
```

Save both files to enable the changes you’ve made.

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FlipFactory has been designed specifically for professionals skilled in the art of digital media decoding and encoding transformation and workflow automation, to facilitate the automation of complex media operations and workflow that require a multitude of input and output media formats, delivery to numerous types of media devices and file systems, and notification of media systems including broadcast automation systems and media asset management systems.

The FlipFactory architecture and user interface is designed to provide maximum flexibility in the setup and configuration of these complex media transformations and workflow. In providing this high degree of flexibility, it is possible for media transformation and workflow processes to be configured that are impractical, likely to result in unexpected or unintended results, or beyond the limits of FlipFactory to perform satisfactorily. Additionally, FlipFactory may be executed on a platform that lacks the performance or capacity to perform the media transformations and workflow you've configured, which is your responsibility to specify. Telestream has chosen to implement FlipFactory to provide the greatest flexibility without limiting its functionality to only those transformations and workflow that are known with certainty to be within its performance capabilities, including those limits imposed by the platform upon which you have installed FlipFactory.

Therefore, you acknowledge that you may create transformations and workflow that are impractical or beyond your FlipFactory installation's limits, and Telestream does not warrant that each transformation or workflow you specify or use will complete without error.

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**November, 2007**

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