

Syndication developer guidelines

Transport for London XML feeds

Important: When using a TfL feed (or feeds) you agree to follow the appropriate Terms and Conditions and the implementation rules within this User Guide.

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Technical Description

Transport for London feeds are supplied as XML and provided at a URL.

The feed is supplied with an XSD schema that may be used for validation purposes.

The feed will either be in KML format or follow a common pattern which consists of a header section and at least one data_container section:

```
<feed_identifier>
  <header>
    <element></element>
    ...
  </header>
  <data_container>
    <data_item>
      <element></element>
      ...
    </data_item>
    ...
  </data_container>
  ...
</feed_identifier>
```

Feed header

For feeds not in KML format the header section contains the following elements:

Name	Description	Notes
Identifier	String	Name of feed.
DisplayTitle	String	Optionally displayed as a title and/or link label.
PublishDateTime	String representing UTC in the following format: DDD, DD MMM YYYY HH:MM:SS:sss K (WeekDayNameAbbreviated<space>Day<space>MonthNameAbbreviated<space>Year<space>Hour:Minutes:Seconds:Milliseconds<space>DateTimeOffset)	Timestamp of the feed publication. Used to calculate refresh rates and error conditions.
canonical	PublishDateTime's attribute. String representing UTC in the following format: YYYY-MM-DD HH:MM:SS:sss (Year-Month-Day<space>Hour:Minutes:Seconds:Milliseconds)	Human readable timestamp that should be displayed with the feed content.
Author	String representing an email address	Email address of author - please use this for any support queries.
Owner	String	Denotes Transport for London as the feed owner.

RefreshRate	String representing an integer value in minutes	The period of feed publishing in minutes. This is how often TfL publishes a fresh copy of the feed.
Max_Latency	String representing an integer value in minutes	Maximum time permitted between capturing the feed and displaying the feed.
TimeToError	String representing an integer value in minutes	If Now is greater than PublishDateTime plus TimeToError then the feed is invalid and ErrorMessage (see below) should be displayed.
Schedule	String	Publishing schedule of the feed. Indicates when it should be polled.
OverrideMessage	String	Emergency message to be displayed instead of the feed content.
ErrorMessage	String	To be displayed in the case of an error condition.
FeedInfo	String	Developer information regarding the current state of the feed. Not to be displayed.
Attribution	Container	Copyright information, or similar, which must be displayed with the feed. Child elements are Url and Text.
Attribution..Url	String representing a URL.	TfL attribution link back to the TfL website.

Attribution..Text	String.	TfL attribution text.
Attribution..Logo	String representing a URL	TfL's corporate logo that should be displayed with the feed content.
Language	String	Two character language code.

Feed implementation

Findaride

The `data_item` tags should be iterated to extract the data in each `data_container`. The following is an example from the **Findaride** feed, which has one `data_container` ('Operators'):

```
<FindARide>
  <Header>
    <Identifier></Identifier>
    ...
  </Header>
  <Operators>
    <Operator>
      <Url></Url>
      <TradingName></TradingName>
      ...
    </Operator>
  </Operators>
</FindARide>
```

Findaride - implementation rules

Presentation

In order to provide a unified and easy to understand presentation of TfL data across multiple channels, official TfL branding must be used to display certain information.

- It is recommended that you use the text in the `<DisplayTitle>` tag if you show a title for the feed or refer to the feed in your content with either plain text or hyperlinks.
- The contents of the "canonical" attribute of the `<PublishDateTime>` tag must be displayed on-screen with the feed content.
- Attribution information must be displayed with the feed and can be found in the `<Attribution>` tag. The `<Text>` tags content must be shown. Optionally, attribution information can be linked back to TfL using the URL in the `<Url>` tag.

Timeliness

In order to provide the public with the most accurate information possible, feeds must be obtained and displayed in a timely fashion. In the **Findaride** feed, we provide the information necessary to do this appropriately according to the feed content. All dates and times are UTC.

- Feeds must be grabbed and displayed with the same frequency as that in the `<RefreshRate>` tag.
- Feeds should be grabbed and displayed in synchronicity with the `<Schedule>` tag. For example, if the publishing schedule is "Every quarter", please grab the feed a short time after that.
- Feeds must be displayed by you within a certain period after being grabbed, represented by the `<Max_Latency>` tag. The pseudocode is as follows:

```
If FeedDisplayDateTime > (FeedCapture DateTime + Max_Latency)
Then hide feed And display "This information is not currently
available".
```

- A feed must not be displayed when it is grabbed and the period allowed in the `<TimeToError>` tag has been exceeded. The pseudocode is as follows:

```
If Now > (PublishDateTime + TimeToError) Then hide feed.
```

```
If ErrorMessage exists Then display ErrorMessage Else display
"This information is not currently available".
```

- A feed must not be displayed when it contains an override message. The pseudocode is as follows:

```
If OverrideMessage Exists Then hide feed And display
OverrideMessage.
```

Live traffic cameras

The `data_item` tags should be iterated to extract the data in each `data_container`. The following is an example from the **Live Traffic Cameras** feed, which has one `data_container` ('Cameras'):

```
<TrafficCameraUpdate>
  <name>Transport for London CCTV information</name>
  ...
  <Header>
    <Identifier></Identifier>
    ...
  </Header>
  <Cameras>
    <Camera>
      <Title></ Title>
      ...
      <Placemark>
        <name></name>
        <description></description>
        <Point>
          <coordinates></coordinates>
        </Point>
      </Placemark>
    </Camera>
  </Cameras>
</TrafficCameraUpdate>
```

Live traffic cameras - implementation rules

Presentation

In order to provide a unified and easy to understand presentation of TfL data across multiple channels, official TfL branding must be used to display certain information.

- The Live Traffic Cameras feed is supplied with branding. The branding must not be removed. Camera images must not be cropped.
- It is recommended that you use the text in the `<DisplayTitle>` tag if you show a title for the feed or refer to the feed in your content with either plain text or hyperlinks.
- The contents of the "canonical" attribute of the `<PublishDateTime>` tag must be displayed on-screen with the feed content.

- Attribution information must be displayed with the feed and can be found in the <Attribution> tag. The <Text> tags content must be shown. Optionally, attribution information can be linked back to TfL using the URL in the <Url> tag.

Timeliness

In order to provide the public with the most accurate information possible, feeds must be obtained and displayed in a timely fashion. In the **Live Traffic Cameras** feed, we provide the information necessary to do this appropriately according to the feed content. All dates and times are UTC.

- Feeds must be grabbed and displayed with the same frequency as that in the <RefreshRate> tag.
- Feeds should be grabbed and displayed in synchronicity with the <Schedule> tag. For example, if the publishing schedule is "Every quarter", please grab the feed a short time after that.
- Feeds must be displayed by you within a certain period after being grabbed, represented by the <Max_Latency> tag. The pseudocode is as follows:

```
If FeedDisplayDateTime > (FeedCapture DateTime + Max_Latency) Then
hide feed And display "This information is not currently available".
```

- A feed must not be displayed when it is grabbed and the period allowed in the <TimeToError> tag has been exceeded. The pseudocode is as follows:

```
If Now > (PublishDateTime + TimeToError) Then hide feed.
```

```
If ErrorMessage exists Then display ErrorMessage Else display "This
information is not currently available".
```

- A feed must not be displayed when it contains an override message. The pseudocode is as follows:

```
If OverrideMessage Exists Then hide feed And display OverrideMessage.
```

Live traffic disruptions

The `data_item` tags should be iterated to extract the data in each `data_container`. The following is an example from the **Live Traffic Disruptions** feed, which has one `data_container` ('roadrunner'):

```
<Root>
  <name>Transport for London Live Traffic Disruptions</name>

  <Header>
    <Identifier>TfL | Events</Identifier>

  </Header>
  <roadrunner updatetime="2010-08-26T1551">
    <rr_event>
      <ltisid>185791</ltisid>
      <eventstartdate>2010-08-26</eventstartdate>
      <eventstarttime>0705</eventstarttime>
      <eventenddate>NULL</eventenddate>
      <eventendtime>NULL</eventendtime>
      <event_type>1</event_type>
      <category>Accident</category>
      <title>Aspen Way / A1261 (Poplar)</title>
      <sector>E</sector>
      <location>At the junction of East India Dock Road / A1261</location>
      <description>Eastbound direction. Carriageway restrictions following
accident on Aspen Way at West India Dock Road. </description>
      <lastmodifiedtime>2010-08-26T1549</lastmodifiedtime>
      <severity>Moderate</severity>
      <PostCodeStart>E14</PostCodeStart>
      <PostCodeEnd>NULL</PostCodeEnd>
      <remarkDate>2010-08-26</remarkDate>
      <remarkTime>1548</remarkTime>
      <remark>The Slip Road has reopened. Traffic returning to normal route and
flowing well.</remark>
      <gridEasting>538752</gridEasting>
      <gridNorthing>180913</gridNorthing>

    </rr_event>

  </roadrunner>
</Root>
```

Live traffic disruptions - implementation rules

Presentation

In order to provide a unified and easy to understand presentation of TfL data across multiple channels, official TfL branding must be used to display certain information.

- It is recommended that you use the text in the <DisplayTitle> tag if you show a title for the feed or refer to the feed in your content with either plain text or hyperlinks.
- The contents of the "canonical" attribute of the <PublishDateTime> tag must be displayed on-screen with the feed content.
- Attribution information must be displayed with the feed and can be found in the <Attribution> tag. The <Text> tags content must be shown. Optionally, attribution information can be linked back to TfL using the URL in the <Url> tag.

Timeliness

In order to provide the public with the most accurate information possible, feeds must be obtained and displayed in a timely fashion. In the **Live traffic disruptions** feed, we provide the information necessary to do this appropriately according the feed content. All dates and times are UTC.

- Feeds must be grabbed and displayed with the same frequency as that in the <RefreshRate> tag.
- Feeds should be grabbed and displayed in synchronicity with the <Schedule> tag.
- Feeds must be displayed by you within a certain period after being grabbed, represented by the <Max_Latency> tag. The pseudocode is as follows:

```
If FeedDisplayDateTime > (FeedCapture DateTime + Max_Latency) Then  
hide feed And display "This information is not currently available".
```

- A feed must not be displayed when it is grabbed and the period allowed in the <TimeToError> tag has been exceeded. The pseudocode is as follows:

```
If Now > (PublishDateTime + TimeToError) Then hide feed.
```

If ErrorMessage exists Then display ErrorMessage Else display "This information is not currently available".

- If feed is blank i.e. does not contain any rr_event elements, display the Override message.

Live roadside message signs

The `data_item` tags should be iterated to extract the data in each `data_container`. The following is an example from the **Live Roadside Message Signs** feed, which has one `data_container` ('vms'):

```
<Root>
  <name>Transport for London Live Traffic Disruptions</name>

  <Header>
    <Identifier>TfL | Events</Identifier>

  </Header>
    <vms updatetime="2010-08-26T1550">
      <vmssign>
        <siteid>00/000705</siteid>
        <easting>532962</easting>
        <northing>180693</northing>
        <signtext></signtext>
        <roadnr>A3211</roadnr>
      </vmssign>

    </vms>
  </Root>
```

Live roadside message signs - implementation rules

Presentation

In order to provide a unified and easy to understand presentation of TfL data across multiple channels, official TfL branding must be used to display certain information.

- It is recommended that you use the text in the `<DisplayTitle>` tag if you show a title for the feed or refer to the feed in your content with either plain text or hyperlinks.
- The contents of the "canonical" attribute of the `<PublishDateTime>` tag must be displayed on-screen with the feed content.
- Attribution information must be displayed with the feed and can be found in the `<Attribution>` tag. The `<Text>` tags content must be shown. Optionally,

attribution information can be linked back to TfL using the URL in the <Url> tag.

Timeliness

In order to provide the public with the most accurate information possible, feeds must be obtained and displayed in a timely fashion. In the **Live Roadside Message Signs** feed, we provide the information necessary to do this appropriately according to the feed content. All dates and times are UTC.

- Feeds must be grabbed and displayed with the same frequency as that in the <RefreshRate> tag.
- Feeds should be grabbed and displayed in synchronicity with the <Schedule> tag.
- Feeds must be displayed by you within a certain period after being grabbed, represented by the <Max_Latency> tag. The pseudocode is as follows:

```
If FeedDisplayDateTime > (FeedCapture DateTime + Max_Latency) Then  
hide feed And display "This information is not currently available".
```

- A feed must not be displayed when it is grabbed and the period allowed in the <TimeToError> tag has been exceeded. The pseudocode is as follows:

```
If Now > (PublishDateTime + TimeToError) Then hide feed.
```

```
If ErrorMessage exists Then display ErrorMessage Else display "This  
information is not currently available".
```

- If feed is blank i.e. does not contain any vmssign elements, display the Override message.

Oyster Ticket Stop locations

Station locations feed is supplied in KML format.

It includes a <Style> element that contains a link to the Oyster Ticket Stop logo in the <IconStyle><Icon><href> element.

Each stop is represented by a Placemark element and sub elements.

```
<kml xmlns="http://earth.google.com/kml/2.2">
  <Document>
    <name>Transport for London Stations</name>
    <open>0</open>
    <description>Transport for London Stations</description>
    <Style id="stopStyle">
      <IconStyle>
        <Icon>
          <href></href>
        </Icon>
      </IconStyle>
    </Style>
    <Placemark>
      <name></name>
      <description></description>
      <Point>
        <coordinates></coordinates>
      </Point>
      <styleUrl>#stopStyle</styleUrl>
    </Placemark>
  </Document>
</kml>
```

Oyster Ticket Stop locations - implementation rules

Presentation

In order to provide a unified and easy to understand presentation of TfL data across multiple channels, official TfL branding must be used to display certain information.

- The Oyster Ticket Stop logo must be used to denote the Ticket Stop locations.

Pier locations

Pier locations feed is supplied in KML format.

It includes a <Style> element that contains a link to the River roundel in the <IconStyle><Icon><href> element.

Each pier is represented by a Placemark element and sub elements.

```
<kml xmlns="http://www.opengis.net/kml/2.2">
  <Document>
    <name>Transport for London Stations</name>
    <open>0</open>
    <description>Transport for London Stations</description>
    <Style id="riverStyle">
      <IconStyle>
        <Icon>
          <href></href>
        </Icon>
      </IconStyle>
    </Style>
    <Placemark>
      <name></name>
      <description></description>
      <Point>
        <coordinates></coordinates>
      </Point>
      <styleUrl>#riverStyle</styleUrl>
    </Placemark>
  </Document>
</kml>
```

Pier locations - implementation rules

Presentation

In order to provide a unified and easy to understand presentation of TfL data across multiple channels, official TfL branding must be used to display certain information.

- The River roundel must be used to denote Pier locations

Station facilities

Station facilities feed is supplied in Xml format.

The `data_item` tags should be iterated to extract the data in each `data_container`. The following is an example from the **Station facilities** feed, which has one `data_container` ('Stations'):

It also includes `<Style>` elements (`tubeStyle`, `dlrStyle` and `overgroundStyle`) that contain a link to the Tube, Docklands Light Railway (DLR) and London Overground roundels in respective `<IconStyle><Icon><href>` element.

Each station is represented by a station element and sub elements.

```
<Root>
  <Header>
    <Identifier></Identifier>
    ...
  </Header>
  <Style>
    <IconStyle>
      <Icon>
        <href></href>
      </Icon>
    </IconStyle>
  </Style>
  <Stations>
    <Station>
      <Name></Name >
      <contactDetails>...</contactDetails>
      <servingLines>...</servingLines>
      <zones>...</zones>
      <facilities>
        <facility name=""></facility>
      <facilities>
      <entrances>
        ...
      </entrances>
      <openingHours>...</openingHours>
      <Placemark>...</Placemark>
    </Station>
  </Stations>
</Root>
```

Station facilities - implementation rules

Presentation

In order to provide a unified and easy to understand presentation of TfL data across multiple channels, official TfL branding must be used to display certain information.

- If colour is used to represent Tube lines, the appropriate colour value included in the feed must be used. In feeds that contain Tube line-related data we will provide a <BgColour> tag that represents the line and a <Colour> tag to be used for text that overlays <BgColour>.
- If service status messages are used, the appropriate colour value included in the feed must be used. In feeds that contain service status messages data we will provide a <BgColour> tag that represents the significance of the message and a <Colour> tag to be used for text that overlays <BgColour>.
- It is recommended that you use the text in the <DisplayTitle> tag if you show a title for the feed or refer to the feed in your content with either plain text or hyperlinks.
- The contents of the "canonical" attribute of the <PublishDateTime> tag must be displayed on-screen with the feed content.
- Attribution information must be displayed with the feed and can be found in the <Attribution> tag. The <Text> tags content must be shown. Optionally, attribution information can be linked back to TfL using the URL in the <Url> tag.
- The Tube roundel must be used to denote Tube stations.
- The Docklands Light Railway (DLR) roundel must be used to denote DLR stations.
- The London Overground roundel must be used to denote London Overground stations.

Timeliness

In order to provide the public with the most accurate information possible, feeds must be obtained and displayed in a timely fashion. In the **Station facilities** feed, we

provide the information necessary to do this appropriately according the feed content. All dates and times are UTC.

- Feeds must be grabbed and displayed with the same frequency as that in the <RefreshRate> tag.
- Feeds should be grabbed and displayed in synchronicity with the <Schedule> tag. For example, if the publishing schedule is "Every Wednesday at 03:00", please grab the feed a short time after that.
- Feeds must be displayed by you within a certain period after being grabbed, represented by the <Max_Latency> tag. The pseudocode is as follows:

```
If FeedDisplayDateTime > (FeedCapture DateTime + Max_Latency) Then  
hide feed And display "This information is not currently available".
```

- A feed must not be displayed when it is grabbed and the period allowed in the <TimeToError> tag has been exceeded. The pseudocode is as follows:

```
If Now > (PublishDateTime + TimeToError) Then hide feed.
```

```
If ErrorMessage exists Then display ErrorMessage Else display "This  
information is not currently available".
```

- A feed must not be displayed when it contains an override message. The pseudocode is as follows:

```
If OverrideMessage Exists Then hide feed And display OverrideMessage.
```

Station locations

Station locations feed is supplied in KML format.

It includes <Style> elements (tubeStyle, dlrStyle and overgroundStyle) that contain a link to the Tube, Docklands Light Railway (DLR) and London Overground roundels in respective <IconStyle><Icon><href> element.

Each station is represented by a Placemark element and sub elements.

```
<kml xmlns="http://www.opengis.net/kml/2.2">
  <Document>
    <name>Transport for London Stations</name>
    <open>0</open>
    <description>Transport for London Stations</description>
    <Style id="tubeStyle">
      <IconStyle>
        <Icon>
          <href></href>
        </Icon>
      </IconStyle>
    </Style>
    <Style id="dlrStyle">
      <IconStyle>
        <Icon>
          <href></href>
        </Icon>
      </IconStyle>
    </Style>
    <Style id="overgroundStyle">
      <IconStyle>
        <Icon>
          <href></href>
        </Icon>
      </IconStyle>
    </Style>
    <Placemark>
      <name></name>
      <description></description>
      <Point>
        <coordinates></coordinates>
      </Point>
      <styleUrl></styleUrl>
    </Placemark>
  </Document>
</kml>
```

```
</Document>  
</kml>
```

Station locations - implementation rules

Presentation

In order to provide a unified and easy to understand presentation of TfL data across multiple channels, official TfL branding must be used to display certain information.

- The Tube roundel must be used to denote Tube stations.
- The Docklands Light Railway (DLR) roundel must be used to denote DLR stations.
- The London Overground roundel must be used to denote London Overground stations.

Tube this weekend

The `data_item` tags should be iterated to extract the data in each `data_container`. The following is an example from the **Tube This Weekend** feed, which has two `data_containers` ('Lines' and 'Stations'):

```
<TubeThisWeekend>
  <Header>
    <Identifier></Identifier>
    ...
  </Header>
  <Lines>
    <Line>
      <Name></ Name >
      ...
    </Line>
    ...
  </Lines>
  <Stations>
    <Station>
      <Name></ Name >
      ...
    </Station>
    ...
  </Stations>
</TubeThisWeekend>
```

Tube this weekend - implementation rules

Presentation

In order to provide a unified and easy to understand presentation of TfL data across multiple channels, official TfL branding must be used to display certain information.

- If colour is used to represent Tube lines, the appropriate colour value included in the feed must be used. In feeds that contain Tube line-related data we will provide a `<BgColour>` tag that represents the line and a `<Colour>` tag to be used for text that overlays `<BgColour>`.
- If service status messages are used, the appropriate colour value included in the feed must be used. In feeds that contain service status messages data we

will provide a <BgColour> tag that represents the significance of the message and a <Colour> tag to be used for text that overlays <BgColour>.

- It is recommended that you use the text in the <DisplayTitle> tag if you show a title for the feed or refer to the feed in your content with either plain text or hyperlinks.
- The contents of the "canonical" attribute of the <PublishDateTime> tag must be displayed on-screen with the feed content.
- Attribution information must be displayed with the feed and can be found in the <Attribution> tag. The <Text> tags content must be shown. Optionally, attribution information can be linked back to TfL using the URL in the <Url> tag.

Timeliness

In order to provide the public with the most accurate information possible, feeds must be obtained and displayed in a timely fashion. In the **Tube This Weekend** feed, we provide the information necessary to do this appropriately according the feed content. All dates and times are UTC.

- Feeds must be grabbed and displayed with the same frequency as that in the <RefreshRate> tag.
- Feeds should be grabbed and displayed in synchronicity with the <Schedule> tag. For example, if the publishing schedule is "Every Wednesday at 03:00", please grab the feed a short time after that.
- Feeds must be displayed by you within a certain period after being grabbed, represented by the <Max_Latency> tag. The pseudocode is as follows:

```
If FeedDisplayDateTime > (FeedCapture DateTime + Max_Latency) Then  
hide feed And display "This information is not currently available".
```

- A feed must not be displayed when it is grabbed and the period allowed in the <TimeToError> tag has been exceeded. The pseudocode is as follows:

If Now > (PublishDateTime + TimeToError) Then hide feed.

If ErrorMessage exists Then display ErrorMessage Else display "This information is not currently available".

- A feed must not be displayed when it contains an override message. The pseudocode is as follows:

If OverrideMessage Exists Then hide feed And display OverrideMessage.

Advertising Guidelines

Clause 2.1.5. in the related terms and conditions states you shall not include any advertisements in the Transport Information.

Advertisements, including pop-ups, can be run alongside, above and below the Transport Information. You are not permitted to include in-line advertising within the Transport Information. In addition, you must not run advertisements on your website, or digital application, which interact with the Transport Information in such a way as to make it appear as if TfL is supporting the brand advertised.

Support

If you require technical support when implementing a TfL feed, please refer to our common questions which are available in the TfL Developers' Area (tfl.gov.uk/developers).

If an answer to your support issue is not provided, contact us through the link also available in the Developers' Area.