Developer information in the Release notes

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DOCUMENT HISTORY

2005-Feb-22 1.00	Initial version.

1. OVERVIEW

When the firmware version of an Axis video product is updated, it is released and published on **www.axis.com** along with a Release notes document. The Release notes contain upgrade instructions, information about corrections made since the last release, and also information about known problems and limitations. Besides this it also contains developer information such as the supported HTTP API groups and which templates to use for dynamic parameter handling. The Release notes for some products also contain a list of supported HTTP API image resolutions, which resolutions are available as bitmap images and which resolutions that can be rotated.

IMPORTANT NOTICES!

Axis Communications AB provides **no** guarantee that any of the examples shown in this document will work for any particular application.

Axis Communications AB **cannot** and **will not** be held liable for any damage inflicted to any device as a result of the examples or instructions mentioned in this document.

Axis Communications AB reserves the right to make changes to this document without prior notice.

Please bear in mind that the flash chip manufacturer estimates the number of writes to the flash chips to about 100,000. Writing a lot of temporary files to the flash memory should thus be avoided. Use the ram disk mounted on `/tmp` instead.

2. HTTP API GROUPS

All Axis network cameras and video servers have an HTTP-based Application Programming Interface (API). This HTTP API provides functionality for requesting images, controlling network camera functions (PTZ, relays etc.) and setting/retrieving internal parameter values. Currently there are two versions of the HTTP API. One of them supports Axis Network cameras and video servers with firmware version 2.xx and 3.xx, and the other supports network cameras and video servers with firmware version 4.xx. Products using firmware version 4.xx are in most cases backward compatible with the HTTP API version 1, especially with the most basic HTTP requests. However to be able to use ALL functionality and new features, HTTP API version 2 must be used. The HTTP API specifications, a document describing the differences between them and a Product Interface Guide are available at **www.axis.com**.

The HTTP API documents are divided into different groups, where requests with similar functionality are grouped together. The intention with this is to make the documents easier to read and use, but also to be able to point out product specific information.

For example:
The **General** group contains all requests that are common for most of our video products. Here are request for parameter handling, add modify and delete users, restart the server, set the product to factory default, requesting server report and systems logs etc.

The **Image and Video** group contains requests and responses for Images size, Video status, Image overlay, Bitmap, JPEG/MJPEG, MPEG-4 etc.

The **PTZ** group contains information about how to upload a PTZ driver, control the Pan, Tilt and Zoom behaviour and the PTZ control queue etc.

The **Motion Detection** group describes functionality to add and remove motion detection windows. Information about how to request a stream of motion detection levels is also provided. Video products that have built-in motion detection support the Motion Detection group.

The **I/O** group is supported by products that have an Input/Output connector, and contains requests for getting the current states of the inputs and outputs. Requests for simulating the value of an input without doing an actual hardware trigger are also available.

All products that have implemented a generic driver support the requests specified in the **Serial Port** group. With these requests it is possible to open a serial port and to send and receive data on that COM port.

The **IP filter** group describes functionality to permit only the listed IP addresses to access the Axis device.

The **Audio** group describes functionality to request an Audio stream and to transmit audio back to the server.

These groups are just examples of the groups presented in the HTTP API. The information on which API groups that is supported by each product can be found in the product-specific Release notes. The Release notes document can be found below each product page, product support, firmware.

3. TEMPLATES

The Release notes describe the product's available built-in templates that can be used for dynamic parameter creation. Dynamic parameter groups can be created in run-time using the param.cgi?action=add according to **Axis' HTTP API**. Each dynamic parameter group have a template file containing a set of parameters, all set to a default value. All parameter groups and which template file to use for each dynamic parameter group can be found in the **parameter specification**. Supported parameter groups and their templates are specified in the product's Release notes. The document **Event handling via HTTP** (pdf) describes how to create Event parameters using the HTTP API.

4. RELEASE NOTES EXAMPLES

The Application Developer information in the Release notes for AXIS 241Q, firmware version 4.03:

```
Application Developer Information
=================================

The following HTTP API groups are supported by the AXIS 241Q. For more
information please refer to the HTTP API 2.00 document available at
www.axis.com.

Group             Exceptions
=====             ==========
```

```
General
Image and Video
PTZ
Motion Detection
I/O
Serial port

Built in templates for dynamic parameters are:

Template         Group
========         =====
'event'          Event
'external_video' ExternalVideo
'ftpaction'      Event.E#.Actions
'ftp_config'     EventServers.FTP
'httpaction'     Event.E#.Actions
'http_config'    EventServers.HTTP
'hwaction'       Event.E#.Actions
'motion'         Motion
'preset'         PTZ.PresetPos
'preset_hidden'  PTZ.PresetPos
'ptzaction'      Event.E#.Actions
'smtpaction'     Event.E#.Actions
'source'         Sequence.S#.Source
'tcpaction'      Event.E#.Actions
'tcp_config'     Eventservers.TCP
```

The Application Developer Information in Release Notes for AXIS 211, firmware version 4.11:

```
Application Developer Information
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Supported HTTP API Image Resolutions

Resolution  Exceptions
==========  ==========
768x576     1)
704x576     1) 2)
704x480        2)
704x288        2)
704x240        2)
640x480
480x360
384x288
352x288        2) 3)
352x240        2) 3)
320x240
240x180              4)
192x144
176x144        2) 3)
176x120        2) 3)
160x120

1) Not available as bitmap (bmp) image
2) Not equally scaled
3) No support for 90/270 degrees rotation
4) 176x240 when rotated 90/270 degrees

The following HTTP API groups are supported by the AXIS 211. For more
information please refer to the HTTP API specification version 2, available
at www.axis.com.

Group             Exceptions
=====             ==========
General
Image and Video   Video status
Motion Detection
I/O
IP filter

Built in templates for dynamic parameters are:

Template         Group
```

========	=====
'event'	Event
'external_video'	ExternalVideo
'ftpaction'	Event.E#.Actions
'ftp_config'	EventServers.FTP
'httpaction'	Event.E#.Actions
'http_config'	EventServers.HTTP
'hwaction'	Event.E#.Actions
'motion'	Motion
'smtpaction'	Event.E#.Actions
'source'	Sequence.S0.Source
'tcpaction'	Event.E#.Actions
'tcp_config'	EventServers.TCP