Video Analytics – Tips and tricks   BOSCH

Position a moving camera with Video Analytics

GET MORE DETAIL IF AN ALARM IS TRIGGERED

In a large scene with lots of activity there is often the need for more detail from a certain area when an alarm is triggered. Intelligent Bosch cameras with built-in Video Analytics can direct a moving camera to an area where the Video Analytics alarm is triggered by a fixed camera. The moving camera can zoom in on the object of interest by automatically moving the camera to a predefined detection zone. With this, images with more detail are captured to identify or recognize the object. The object of interest can even be followed when it moves out of the field of view from the fixed camera by using a moving camera with Intelligent Tracking. The object can automatically be tracked so it doesn't get lost and more relevant data is captured.

▶ Get more detail to identify or recognize objects if an alarm is triggered

▶ Follow objects of interest by triggering Intelligent Tracking with a fixed camera

▶ Ensure large areas are covered and details are captured

| Supported moving cameras with built-in Video Analytics	
Moving cameras with Intelligent Tracking (Intelligent Video Analytics)	- AUTODOME IP starlight 7000 (30x zoom) - MIC IP starlight 7000i (30x zoom) - MIC IP fusion 9000i (30x zoom)
Moving cameras with Essential Video Analytics	- AUTODOME IP 4000i (12x zoom) - AUTODOME IP 5000i (20x zoom) - AUTODOME IP 5000i IR (30x zoom)

Supported fixed cameras with built-in Video Analytics	
Fixed domes with Intelligent Video Analytics	- FLEXIDOME IP starlight 7000 - FLEXIDOME IP starlight 8000i
Fixed cameras with Intelligent Video Analytics	- DINION IP starlight 7000 - DINION IP starlight 8000 MP - DINION IP ultra 8000 MP (4K ultra HD) - DINION IP thermal 8000
Fixed domes with Essential Video Analytics	- FLEXIDOME IP 4000i and 5000i - FLEXIDOME IP starlight 6000
Fixed cameras with Essential Video Analytics	- IP 3000i series - DINION IP 4000i, 5000i and 6000i IR - DINION IP starlight 6000

HOW IT WORKS:

1. Install a fixed camera for an overview image
2. Define Video Analytics detection areas
3. Fixed camera with built-in Video Analytics triggers an alarm
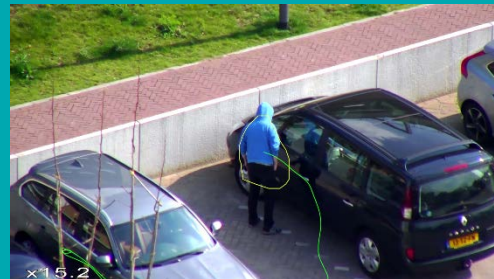
4. Moving camera is directed to detection zone
5. More detail from object of interest is captured
6. With Intelligent Tracking the object can be tracked outside the field of view of the fixed camera

APPLICATION EXAMPLES:

Parking lot

▶ Identify objects of interest

Airport

▶ Cover large areas and track objects which are moving across the apron

Coastline / Harbors

▶ Get a close-up or start tracking a ship

Traffic

▶ Identify vehicles stopped on a highway or going in a wrong direction

Video Analytics – Tips and tricks

EXAMPLE: LARGE PARKING AREA

Tips

▶ Multiple fixed cameras may share the same PTZ camera. Example: Four cameras may cover a large area that is reachable by the same, single PTZ camera.

▶ There is a preconfigured timeout period of 5 minutes after which Intelligent Tracking will be turned off. This ensure that a camera will not continue tracking objects indefinitely. Instead, the camera will return to its home position or tour.

▶ High levels of scene activity might keep a PTZ camera moving from area to area. A fixed camera always maintains the full field of view to capture activity, even if the PTZ camera moves to another area. The goal with the PTZ camera is to capture identification level image quality of the object which triggered the analytics. Even a few seconds may be enough for this.

▶ The script can run on a schedule. E.g. during hours with expected low or high activity.

▶ Read other tips and tricks:

   ▶ Intelligent Tracking

   ▶ People counting

   ▶ Intrusion detection

Example: Large parking area

Position a Bosch camera with Video Analytics which covers the complete parking area.
Position a Bosch PTZ camera on a pole or rooftop so it can zoom in to areas where more detail is needed in case of an alarm.

How to configure:
▶ Create up to 8 individual Video Analytics detection zones throughout the scene.
▶ Create up to 8 individual presets (#10-17), each zoomed to an area sized appropriately to the above mentioned Video Analytics detection zones.
▶ Match each Video Analytics detection zone with the corresponding preset.
▶ Optional: Intelligent Tracking is activated automatically to help ensure the PTZ camera accurately follows the object which is triggered by Video Analytic.
▶ A script needs to be placed in the Alarm Task Editor page (in camera web browser) of the camera running the Video Analytic task(s) which is intended to trigger an adjacent PTZ to GOTO preset.
▶ The IP addresses in the script needs to match the IP address of the PTZ camera.

The script can be found on the next pages.

SCRIPT:

```
//GO TO PRESET 10
RCPCOMMAND PRESET10:=
{COMMAND("RCP.XML?COMMAND=0X09A5&TYPE=P_OCTET&DIRECTION=WRITE&PAYLOAD=0X80000201B08007050A&NUM=1")
IP("10.40.50.70") };

//GO TO PRESET 11
RCPCOMMAND PRESET11:=
{COMMAND("RCP.XML?COMMAND=0X09A5&TYPE=P_OCTET&DIRECTION=WRITE&PAYLOAD=0X80000201B08007050B&NUM=1")
IP("10.40.50.70") };

//GO TO PRESET 12
RCPCOMMAND PRESET12:=
{COMMAND("RCP.XML?COMMAND=0X09A5&TYPE=P_OCTET&DIRECTION=WRITE&PAYLOAD=0X80000201B08007050C&NUM=1")
IP("10.40.50.70") };

//GO TO PRESET 13
RCPCOMMAND PRESET13:=
{COMMAND("RCP.XML?COMMAND=0X09A5&TYPE=P_OCTET&DIRECTION=WRITE&PAYLOAD=0X80000201B08007050D&NUM=1")
IP("10.40.50.70") };

//GO TO PRESET 14
RCPCOMMAND PRESET14:=
{COMMAND("RCP.XML?COMMAND=0X09A5&TYPE=P_OCTET&DIRECTION=WRITE&PAYLOAD=0X80000201B08007050E&NUM=1")
IP("10.40.50.70") };

//GO TO PRESET 15
RCPCOMMAND PRESET15:=
{COMMAND("RCP.XML?COMMAND=0X09A5&TYPE=P_OCTET&DIRECTION=WRITE&PAYLOAD=0X80000201B08007050F&NUM=1")
IP("10.40.50.70") };

//GO TO PRESET 16
RCPCOMMAND PRESET16:=
{COMMAND("RCP.XML?COMMAND=0X09A5&TYPE=P_OCTET&DIRECTION=WRITE&PAYLOAD=0X80000201B080070510&NUM=1")
IP("10.40.50.70") };

//GO TO PRESET 17
RCPCOMMAND PRESET17:=
{COMMAND("RCP.XML?COMMAND=0X09A5&TYPE=P_OCTET&DIRECTION=WRITE&PAYLOAD=0X80000201B080070511&NUM=1")
IP("10.40.50.70") };

//GO TO PRESET 18
RCPCOMMAND PRESET18:=
{COMMAND("RCP.XML?COMMAND=0X09A5&TYPE=P_OCTET&DIRECTION=WRITE&PAYLOAD=0X80000201B080070512&NUM=1")
IP("10.40.50.70") };

//GO TO PRESET 19
RCPCOMMAND PRESET19:=
{COMMAND("RCP.XML?COMMAND=0X09A5&TYPE=P_OCTET&DIRECTION=WRITE&PAYLOAD=0X80000201B080070513&NUM=1")
IP("10.40.50.70") };

//GO TO PRESET 20
RCPCOMMAND PRESET20:=
{COMMAND("RCP.XML?COMMAND=0X09A5&TYPE=P_OCTET&DIRECTION=WRITE&PAYLOAD=0X80000201B080070514&NUM=1")
IP("10.40.50.70") };

RCPCOMMAND STARTAUTOTRACKER :=
{COMMAND("RCP.XML?COMMAND=0X09A5&TYPE=P_OCTET&DIRECTION=WRITE&PAYLOAD=0X8000060A00020001&NUM=1")
IP("10.40.50.70") };

RCPCOMMAND STOPAUTOTRACKER :=
{COMMAND("RCP.XML?COMMAND=0X09A5&TYPE=P_OCTET&DIRECTION=WRITE&PAYLOAD=0X8000060A00020000&NUM=1")
IP("10.40.50.70") };
```

```
//SET TEMPSTATE N FOR 5 MIN    10 = 1 SEC
OPERATIONMODE MONOSTABLE1 := {HIGH (3000)};
TEMPSTATE(1) := MONOSTABLE1;
OPERATIONMODE MONOSTABLE2 := {HIGH (3000)};
TEMPSTATE(2) := MONOSTABLE2;
OPERATIONMODE MONOSTABLE3 := {HIGH (3000)};
TEMPSTATE(3) := MONOSTABLE3;
OPERATIONMODE MONOSTABLE4 := {HIGH (3000)};
TEMPSTATE(4) := MONOSTABLE4;
OPERATIONMODE MONOSTABLE5 := {HIGH (3000)};
TEMPSTATE(5) := MONOSTABLE5;
OPERATIONMODE MONOSTABLE6 := {HIGH (3000)};
TEMPSTATE(6) := MONOSTABLE6;
OPERATIONMODE MONOSTABLE7 := {HIGH (3000)};
TEMPSTATE(7) := MONOSTABLE7;
OPERATIONMODE MONOSTABLE8 := {HIGH (3000)};
TEMPSTATE(8) := MONOSTABLE8;
OPERATIONMODE MONOSTABLE9 := {HIGH (3000)};
TEMPSTATE(9) := MONOSTABLE9;
OPERATIONMODE MONOSTABLE10 := {HIGH (3000)};
TEMPSTATE(10) := MONOSTABLE10;
OPERATIONMODE MONOSTABLE11 := {HIGH (3000)};
TEMPSTATE(11) := MONOSTABLE11;

//FOR TESTING
//IF (RELAY(1)) THEN  TEMPSTATE(1) :=STOP(MONOSTABLE1),TEMPSTATE(1) := MONOSTABLE1, TEMPSTATE(1) :=TRUE;
//VCA RULE TRIGGERS STATE ON FOR 5 MIN THEN OFF.
IF  (VCARULE(1,1)) THEN  TEMPSTATE(1) :=STOP(MONOSTABLE1),TEMPSTATE(1) := MONOSTABLE1, TEMPSTATE(1) :=TRUE;
IF  (VCARULE(1,2)) THEN  TEMPSTATE(2) :=STOP(MONOSTABLE2),TEMPSTATE(2) := MONOSTABLE1, TEMPSTATE(2) :=TRUE;
IF  (VCARULE(1,3)) THEN  TEMPSTATE(3) :=STOP(MONOSTABLE3),TEMPSTATE(3) := MONOSTABLE1, TEMPSTATE(3) :=TRUE;
IF  (VCARULE(1,4)) THEN  TEMPSTATE(4) :=STOP(MONOSTABLE4),TEMPSTATE(4) := MONOSTABLE1, TEMPSTATE(4) :=TRUE;
IF  (VCARULE(1,5)) THEN  TEMPSTATE(5) :=STOP(MONOSTABLE5),TEMPSTATE(5) := MONOSTABLE1, TEMPSTATE(5) :=TRUE;
IF  (VCARULE(1,6)) THEN  TEMPSTATE(6) :=STOP(MONOSTABLE6),TEMPSTATE(6) := MONOSTABLE1, TEMPSTATE(6) :=TRUE;
IF  (VCARULE(1,7)) THEN  TEMPSTATE(7) :=STOP(MONOSTABLE7),TEMPSTATE(7) := MONOSTABLE1, TEMPSTATE(7) :=TRUE;
IF  (VCARULE(1,8)) THEN  TEMPSTATE(8) :=STOP(MONOSTABLE8),TEMPSTATE(8) := MONOSTABLE1, TEMPSTATE(8) :=TRUE;
IF  (VCARULE(1,9)) THEN  TEMPSTATE(9) :=STOP(MONOSTABLE9),TEMPSTATE(9) := MONOSTABLE1, TEMPSTATE(9) :=TRUE;
IF  (VCARULE(1,10)) THEN  TEMPSTATE(10) :=STOP(MONOSTABLE10),TEMPSTATE(10) := MONOSTABLE1, TEMPSTATE(10) :=TRUE;
IF  (VCARULE(1,11)) THEN  TEMPSTATE(11) :=STOP(MONOSTABLE11),TEMPSTATE(11) := MONOSTABLE1, TEMPSTATE(11) :=TRUE;

//GOTO PRESET AND TURN TRACKERON AFTER 5 MIN TRACKEROFF
IF (TEMPSTATE(1) ) THEN PRESET10, STARTAUTOTRACKER ELSE STOPAUTOTRACKER;
IF (TEMPSTATE(2) ) THEN PRESET11, STARTAUTOTRACKER ELSE STOPAUTOTRACKER;
IF (TEMPSTATE(3) ) THEN PRESET12, STARTAUTOTRACKER ELSE STOPAUTOTRACKER;
IF (TEMPSTATE(4) ) THEN PRESET13, STARTAUTOTRACKER ELSE STOPAUTOTRACKER;
IF (TEMPSTATE(5) ) THEN PRESET14, STARTAUTOTRACKER ELSE STOPAUTOTRACKER;
IF (TEMPSTATE(6) ) THEN PRESET15, STARTAUTOTRACKER ELSE STOPAUTOTRACKER;
IF (TEMPSTATE(7) ) THEN PRESET16, STARTAUTOTRACKER ELSE STOPAUTOTRACKER;
IF (TEMPSTATE(8) ) THEN PRESET17, STARTAUTOTRACKER ELSE STOPAUTOTRACKER;
IF (TEMPSTATE(9) ) THEN PRESET18, STARTAUTOTRACKER ELSE STOPAUTOTRACKER;
IF (TEMPSTATE(10) ) THEN PRESET19, STARTAUTOTRACKER ELSE STOPAUTOTRACKER;
IF (TEMPSTATE(11) ) THEN PRESET20, STARTAUTOTRACKER ELSE STOPAUTOTRACKER;
```