

ATM Framework

Szoftverismertető

Sensor Technologies Kft

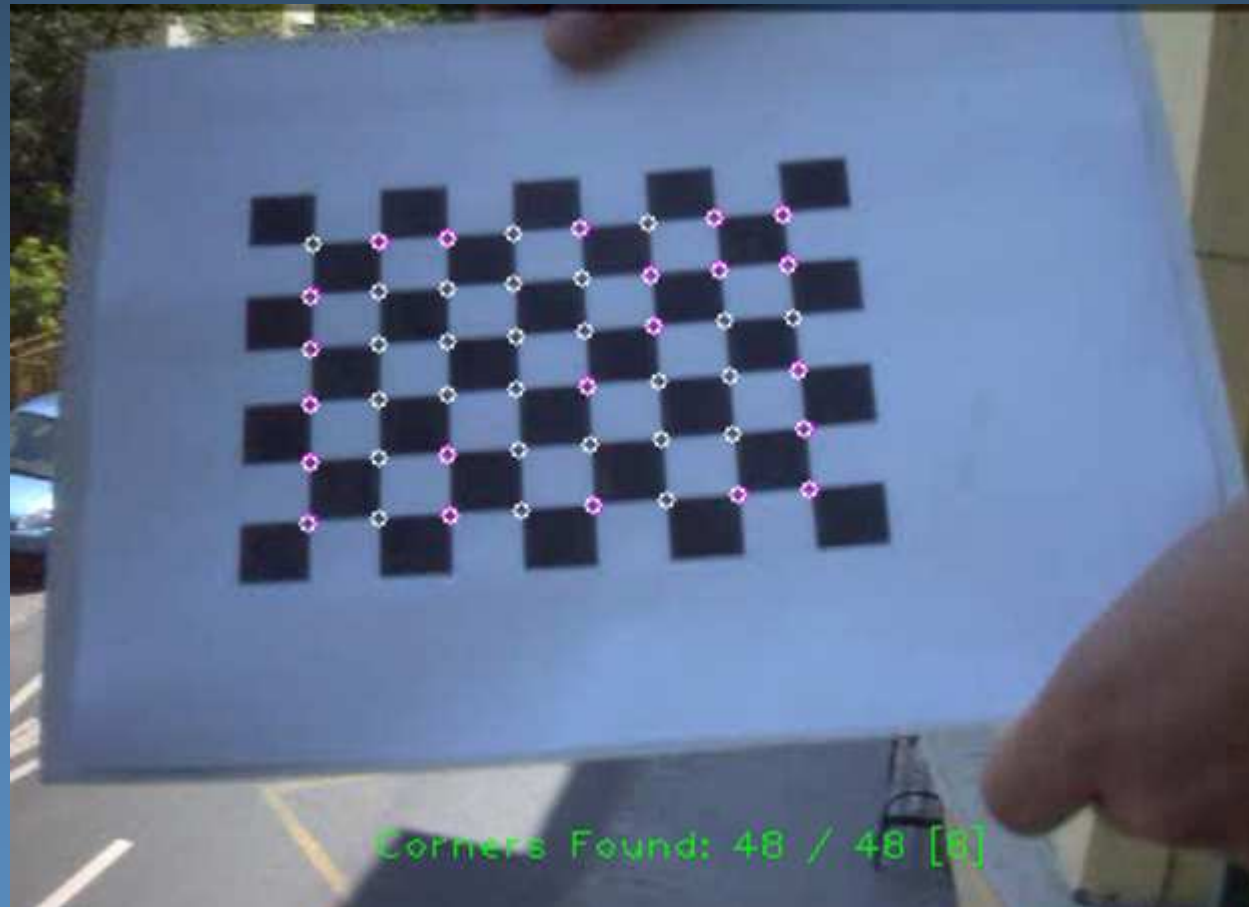
© 2009

SENSOR
technologies

Funkciók

- Kamera paraméterek automatikus meghatározása
 - 3D rekonstrukció
 - Forgalomanalízis referencia objektumok
 - Kommunikációs csatornák, időzítések
 - Stream feldolgozási módok
 - Objektum/esemény elemző stratégiák
 - Események
 - Statisztikák
-

Kamera paraméterek



Kamera paraméterek

CAM TYPE:

Parameters:

Focal Length: mm

Aperture Height: mm

Array Size: × Pixel

Pixel Size: micro M

View Angle (H): degree

PP Distance: mm

Chess Board:

Calibration Frame MAX: frame

Height: sq. mm

Width: sq. mm

Calibration Status:

Calibration:

Distortion:

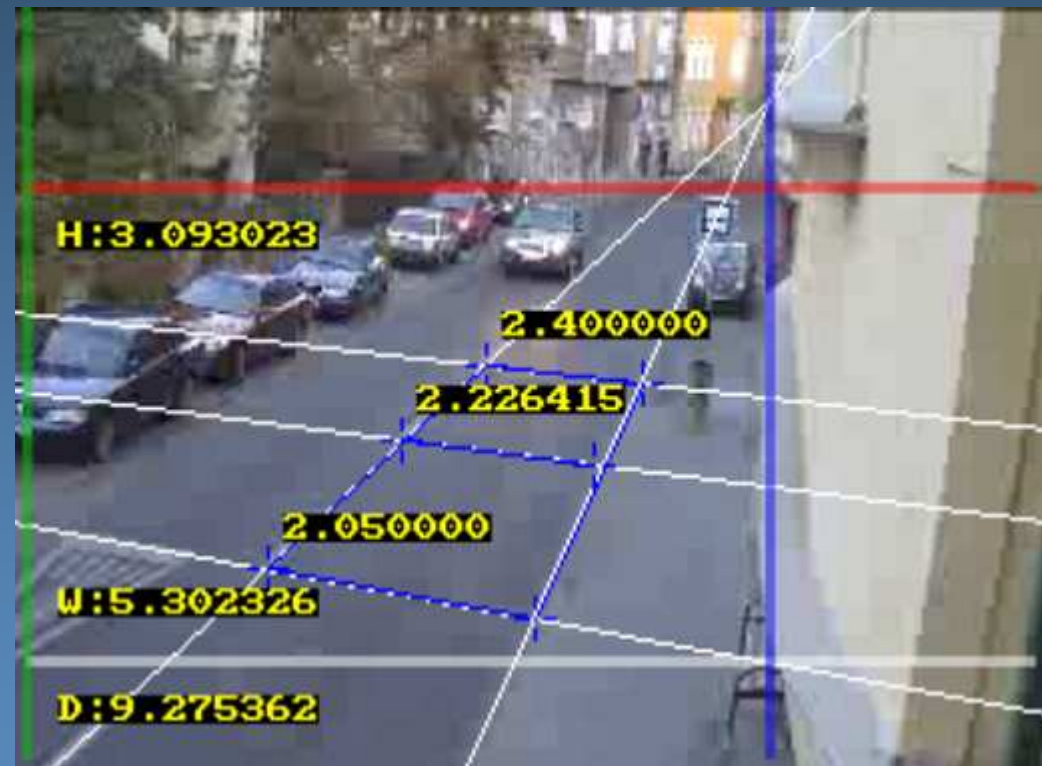
	X	Y
MEAN	<input type="text" value="0.06916"/>	<input type="text" value="0.15429"/>
Radial	<input type="text" value="-16.120"/>	<input type="text" value="-38.405"/>
Tangential	<input type="text" value="0.00000"/>	<input type="text" value="0.00000"/>



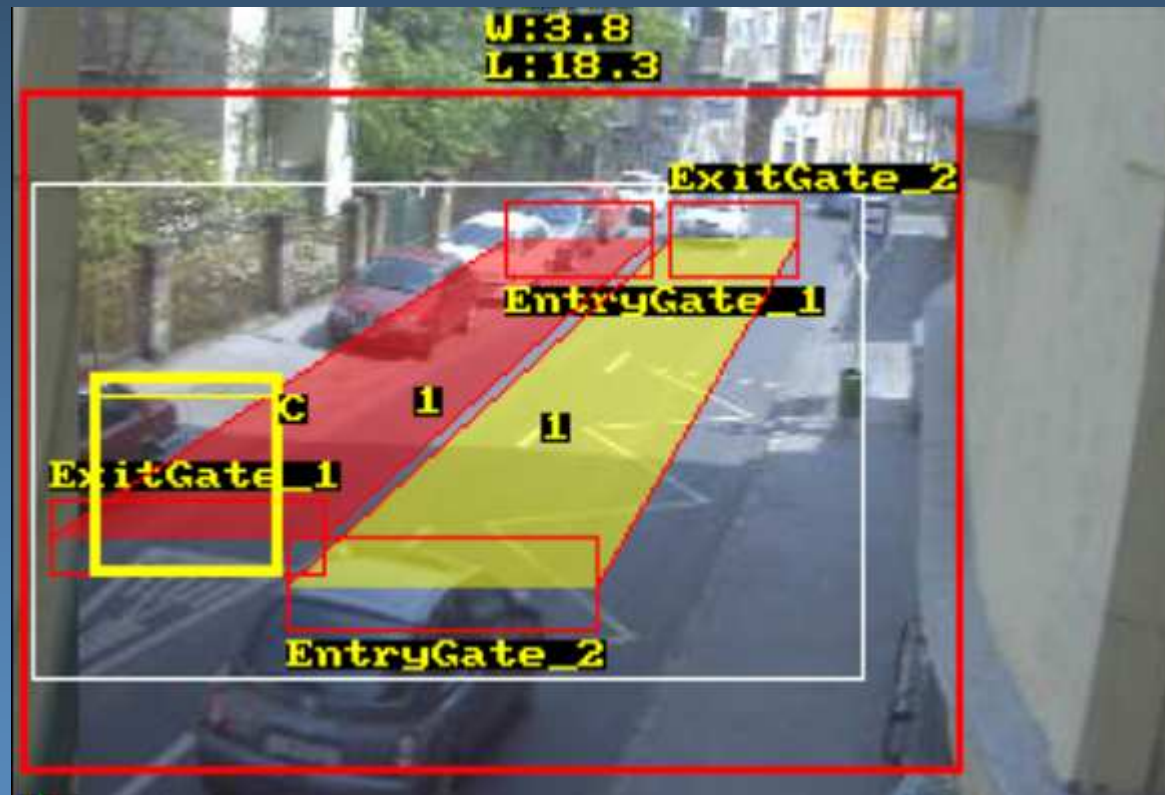
3D rekonstrukció

Distance Min	0.000000 m	<input type="text" value="32"/>
Distance Max	0.000000 m	<input type="text" value="165"/>
Left Border	<input type="text" value="5"/>	
Right Border	<input type="text" value="233"/>	
Distances		
Distance MIN	<input type="text" value="9"/> m	
Distance MAX	<input type="text" value="75"/> m	
CAM Install Height	<input type="text" value="9.600000"/> m	<input type="button" value="Optimize"/>
CAM data		
CAM ID	<input type="text" value="office_320x240"/>	<input type="button" value="Load"/>
Location	<input type="text" value="Fildér utca 16"/>	
CAM Y Degree	<input type="text" value="25"/>	Determined
CAM X Degree	<input type="text" value="7"/>	Determined
Properties		
ZOOM Factor	<input type="text" value="1.000000"/>	<input type="button" value="Refresh"/>
<input checked="" type="radio"/> Borders/Points <input type="radio"/> Perspective <input type="button" value="CLEAR"/> <input type="button" value="Save"/> <input type="button" value="Set ENV"/> <input type="button" value="Cancel"/>		

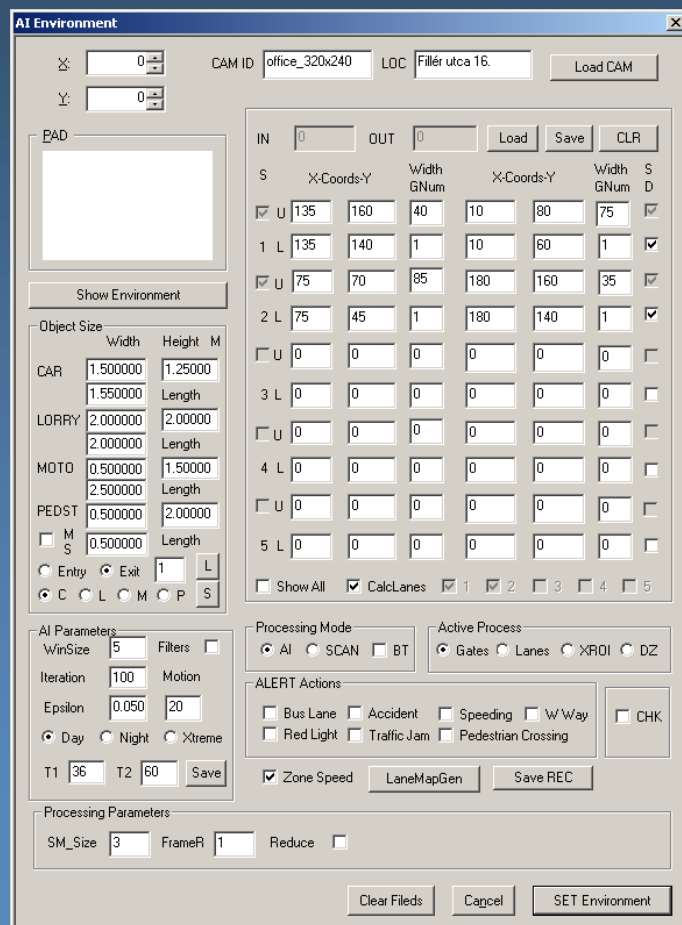
Cross Position	
<input type="radio"/> Left - Down	<input type="radio"/> Left - Up
<input type="radio"/> Right - Down	<input type="radio"/> Right - Up
Reference Points	
<input type="radio"/> L_MIN	<input type="text" value="10.000000"/> m
<input type="radio"/> L_MID	<input type="text" value="15.000000"/> m
<input type="radio"/> L_MAX	<input type="text" value="20.000000"/> m
<input type="radio"/> R_MIN	<input type="text" value="10.000000"/> m
<input type="radio"/> R_MID	<input type="text" value="15.000000"/> m
<input type="radio"/> R_MAX	<input type="text" value="20.000000"/> m
Zone Width	<input type="text" value="2.500000"/> m
Perspective Correction	
<input type="button" value="+"/>	<input type="button" value="+"/>
<input type="button" value="-"/>	<input type="button" value="-"/>
<input type="button" value="+"/>	<input type="button" value="+"/>
<input type="button" value="-"/>	<input type="button" value="-"/>
<input type="button" value="RESET"/>	
Correction	
<input checked="" type="radio"/> Auto	<input type="radio"/> Manual
Offset	<input type="text" value="0.010000"/>
<input type="checkbox"/> Zoom	
CAM Type	
<input type="text" value="AXIS223M"/>	<input type="button" value="Load"/>



Referencia objektumok



Paraméterek



- Adaptív fényviszony meghatározó algoritmus
- Mesterséges intelligencia alapú objektum detektálás és követés

Környezet beállítás

Check Environment Settings

CAM ID:

VD PreProcess

<input checked="" type="checkbox"/>	<input type="button" value="CAM Params"/>	<input checked="" type="checkbox"/>	<input type="button" value="ROI Map"/>
<input checked="" type="checkbox"/>	<input type="button" value="CAM Environment"/>	<input checked="" type="checkbox"/>	<input type="button" value="LANE Maps"/>
<input checked="" type="checkbox"/>	<input type="button" value="GATES / LANES"/>	<input checked="" type="checkbox"/>	<input type="button" value="PROC Mode"/>

GUI

<input checked="" type="checkbox"/>	<input type="button" value="Capture Mode"/>	<input checked="" type="checkbox"/>	<input type="button" value="Server Session"/>
<input checked="" type="checkbox"/>	<input type="button" value="Module PATH"/>	<input checked="" type="checkbox"/>	<input type="button" value="CAM Channel INFO"/>
<input checked="" type="checkbox"/>	<input type="button" value="RT PROC CMD"/>	<input checked="" type="checkbox"/>	<input type="button" value="POST PROC CMD"/>
<input checked="" type="checkbox"/>	<input type="button" value="STREAM Proc Env"/>	<input checked="" type="checkbox"/>	<input type="button" value="BLOB Tracker"/>
<input checked="" type="checkbox"/>	<input type="button" value="AI Params"/>	<input checked="" type="checkbox"/>	<input type="button" value="LUMA Values"/>
<input checked="" type="checkbox"/>	<input type="button" value="STAT Environment"/>	<input checked="" type="checkbox"/>	<input type="button" value="COMM Environment"/>
<input checked="" type="checkbox"/>	<input type="button" value="Events"/>	<input checked="" type="checkbox"/>	<input type="button" value="Debug/Diag"/>

CAM Capture

Camera Capture Settings [X]

Settings

CAM ID:

Camera Capture Source

IP CAM Local RAW STD Pipe Driver ID Mode

Capture Device:

Frame Origin

INPUT Frame Origin Top Left Bottom Left Change OUTPUT Origin RB->BR RAW

Record Events

DIRECTORY PATH

Stream	<input type="text" value="CAPTURE"/>
Snapshot	<input type="text" value="SNAPSHOT"/>
Events	<input type="text" value="EVENT"/>

Capture Commands

<input checked="" type="checkbox"/> Stream	<input type="text" value="!stream"/>
<input checked="" type="checkbox"/> Snapshot	<input type="text" value="!snapshot"/>
<input checked="" type="checkbox"/> Events	<input type="text" value="!events"/>

Cancel SET

AI paraméterek

AI Parameters [X]

Settings

CAM ID:

DAY	WinSize <input type="text" value="5"/>	Iteration <input type="text" value="100"/>	Epsilon <input type="text" value="0.05"/>	T1 <input type="text" value="36"/>	T2 <input type="text" value="60"/>
	<input type="checkbox"/> Use Filters	Motion Threshold <input type="text" value="20"/>	LUMA Threshold <input type="text" value="100"/>	MAX <input type="text" value="0"/>	
NIGHT	WinSize <input type="text" value="11"/>	Iteration <input type="text" value="50"/>	Epsilon <input type="text" value="0.5"/>	T1 <input type="text" value="224"/>	T2 <input type="text" value="256"/>
	<input checked="" type="checkbox"/> Use Filters	Motion Threshold <input type="text" value="15"/>	LUMA Threshold <input type="text" value="1500"/>	MAX <input type="text" value="0"/>	
XTREME	WinSize <input type="text" value="12"/>	Iteration <input type="text" value="100"/>	Epsilon <input type="text" value="0.5"/>	T1 <input type="text" value="38"/>	T2 <input type="text" value="62"/>
	<input checked="" type="checkbox"/> Use Filters	Motion Threshold <input type="text" value="10"/>	LUMA Threshold <input type="text" value="500"/>	MAX <input type="text" value="0"/>	

Fényviszonyok

The screenshot shows a dialog box titled "Luma Values" with a close button (X) in the top right corner. Inside the dialog, there is a text input field containing "office_320x240". Below this, there is a table with three columns: "MIN", "MID", and "MAX". The rows are labeled "DAY", "NIGHT", and "XTREME". Each cell in the table contains a numerical value. At the bottom of the dialog, there is a warning message "Warning! FULL PixMÁp Values!" and two buttons: "Cancel" and "SET".

	MIN	MID	MAX
DAY	1000000	1500000	2000000
NIGHT	500000	4750000	1000000
XTREME	100000	300000	500000

Warning! FULL PixMÁp Values!

Cancel SET

Automatikus fényviszony
határérték meghatározás

Kommunikációs csatornák

- TCP / IP
- Named Pipe
- STD Pipe
- Shared Memory

Communication Settings

Settings

CAM ID: office_320x240

TCP/IP

Wake-Up: 1 sec Timeout: 5 sec Shutdown: 3 sec

Named PIPE

Wake-Up: 1 sec Timeout: 5 sec Shutdown: 2 sec

STD Pipe

Wake-Up: 1 sec Timeout: 5 sec Shutdown: 2 sec

Shared MEM

Wake-Up: 1 sec Timeout: 5 sec Shutdown: 2 sec

CAMERA Directshow

Wake-Up: 10 sec Timeout: 10 sec Shutdown: 5 sec

Save As Default

Cancel SET

Stream feldolgozási módok

- CAM capture mode
- Real-time vagy POST analyzer

Console Test Mode

Command Line Params

URL RAW File
 DRIVER RAW File
 STD Pipe
 WME Channel

URL + Analyzer
 DRIVER + Analyzer
 STD Pipe + Analyzer
 READ RAW + Analyzer

Downloader PATH + FILENAME

CAM ID
 Driver CAM Config

FRAME Width
 Height
 Frame Rate

ANALYZER Mode
 FULL
 CAPTURE

Use CHANNEL Settings
 \$CHANNEL
 ON
 OFF

USE SEND Frame
 ON
 OFF
 (Send FRAME to WME)

USE Show STAT
 ON
 OFF
 (Write STAT on FRAME)

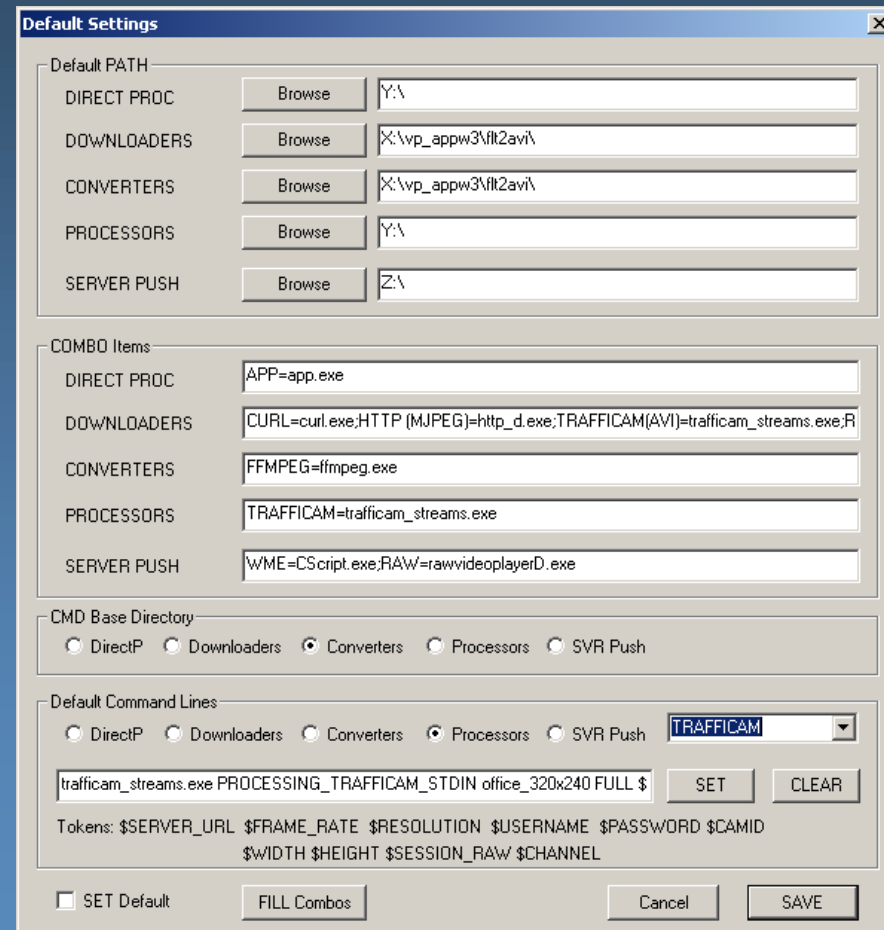
Show DIAG Windows
 ON
 OFF
 (Show DIAG Windows)

Command LINE

PIPE CMDs

Stream Processing Framework

Rugalmasan
integrálható külső
feldolgozó
modulok
(ffmpeg,
MenCoder, WME,
ffserver)



Default Settings

Default PATH

DIRECT PROC Y:\

DOWNLOADERS X:\vp_appw3\flt2avi\

CONVERTERS X:\vp_appw3\flt2avi\

PROCESSORS Y:\

SERVER PUSH Z:\

COMBO Items

DIRECT PROC APP=app.exe

DOWNLOADERS CURL=curl.exe;HTTP (MJPEG)=http_d.exe;TRAFFICAM(AVI)=trafficam_streams.exe;R

CONVERTERS FFMPEG=ffmpeg.exe

PROCESSORS TRAFFICAM=trafficam_streams.exe

SERVER PUSH WME=CScript.exe;RAW=rawvideoplayerD.exe

CMD Base Directory

DirectP Downloaders Converters Processors SVR Push

Default Command Lines

DirectP Downloaders Converters Processors SVR Push TRAFFICAM

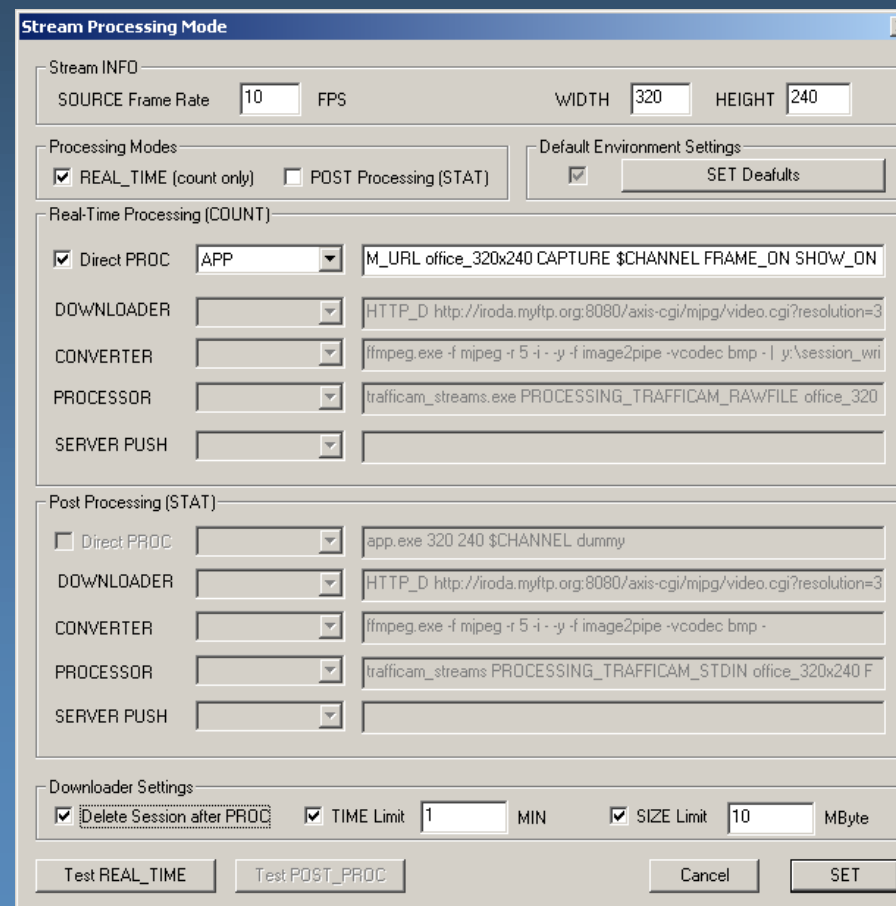
trafficam_streams.exe PROCESSING_TRAFFICAM_STDIN_office_320x240 FULL \$

Tokens: \$SERVER_URL \$FRAME_RATE \$RESOLUTION \$USERNAME \$PASSWORD \$CAMID
\$WIDTH \$HEIGHT \$SESSION_RAW \$CHANNEL

SET Default

Stream feldolgozás beállítás

Feldolgozási
lánc
hozzárendelés



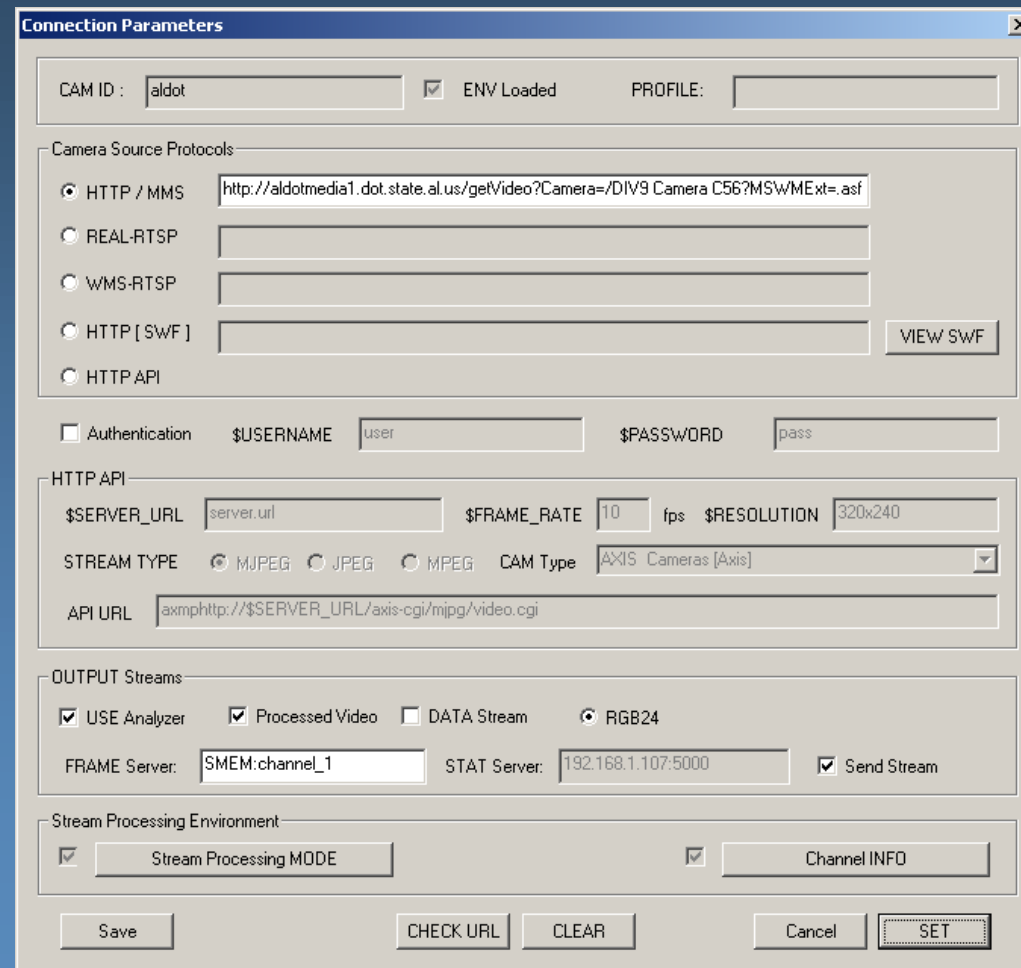
The screenshot shows a Windows-style dialog box titled "Stream Processing Mode". It is divided into several sections for configuring stream processing parameters.

- Stream INFO:** Includes fields for SOURCE Frame Rate (10 FPS), WIDTH (320), and HEIGHT (240).
- Processing Modes:** Features checkboxes for REAL_TIME (count only) and POST Processing (STAT). A "Default Environment Settings" section contains a checked checkbox and a "SET Defaults" button.
- Real-Time Processing (COUNT):** Contains a checked Direct PROC checkbox and a dropdown menu set to "APP". The command field contains: `M_URL office_320x240 CAPTURE $CHANNEL FRAME_ON SHOW_ON`. Below are fields for DOWNLOADER, CONVERTER, PROCESSOR, and SERVER PUSH, each with a dropdown menu and a text input field. The PROCESSOR field contains: `trafficam_streams.exe PROCESSING_TRAFFICAM_RAWFILE office_320`.
- Post Processing (STAT):** Contains an unchecked Direct PROC checkbox and a dropdown menu. The command field contains: `app.exe 320 240 $CHANNEL dummy`. Below are fields for DOWNLOADER, CONVERTER, PROCESSOR, and SERVER PUSH, each with a dropdown menu and a text input field. The PROCESSOR field contains: `trafficam_streams PROCESSING_TRAFFICAM_STDIN office_320x240 F`.
- Downloader Settings:** Includes checkboxes for Delete Session after PROC, TIME Limit (1 MIN), and SIZE Limit (10 MByte).

At the bottom, there are buttons for "Test REAL_TIME", "Test POST_PROC", "Cancel", and "SET".

Camera Session

- Kamera URL
- Jogosultság
- FRAME szerver
- STAT szerver
- CHANNEL információk
- Feldolgozási módok

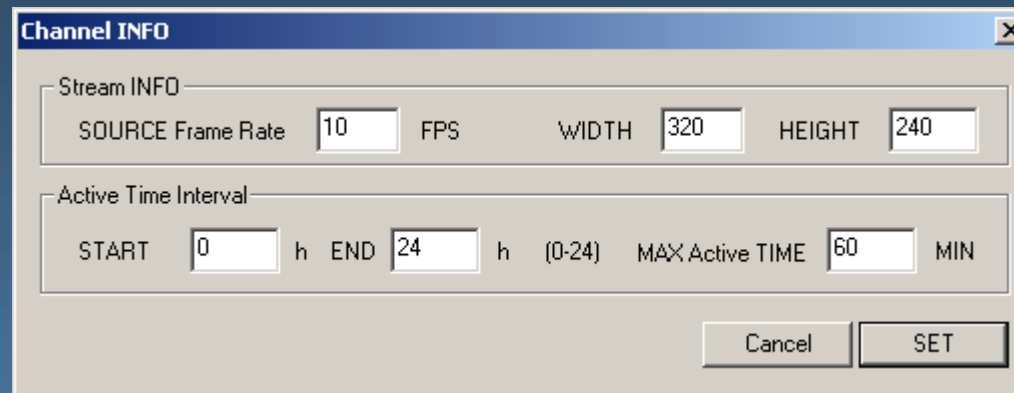


The screenshot shows a 'Connection Parameters' dialog box with the following fields and options:

- CAM ID:** aldot
- ENV Loaded
- PROFILE:** (empty)
- Camera Source Protocols:**
 - HTTP / MMS: http://aldotmedia1.dot.state.al.us/getVideo?Camera=/DIV9 Camera C56?MSWMExt=.asf
 - REAL-RTSP
 - WMS-RTSP
 - HTTP [SWF] (with VIEW SWF button)
 - HTTP API
- Authentication
 - \$USERNAME:** user
 - \$PASSWORD:** pass
- HTTP API:**
 - \$SERVER_URL:** server.url
 - \$FRAME_RATE:** 10 fps
 - \$RESOLUTION:** 320x240
 - STREAM TYPE:** MJPEG JPEG MPEG
 - CAM Type:** AXIS Cameras [Axis]
 - API URL:** axmhttp://\$SERVER_URL/axis-cgi/mjpg/video.cgi
- OUTPUT Streams:**
 - USE Analyzer
 - Processed Video
 - DATA Stream
 - RGB24
 - FRAME Server:** SMEM:channel_1
 - STAT Server:** 192.168.1.107:5000
 - Send Stream
- Stream Processing Environment:**
 - Stream Processing MODE
 - Channel INFO

Buttons at the bottom: Save, CHECK URL, CLEAR, Cancel, SET.

Channel settings



The screenshot shows a 'Channel INFO' dialog box with two main sections: 'Stream INFO' and 'Active Time Interval'. The 'Stream INFO' section contains three input fields: 'SOURCE Frame Rate' set to 10 FPS, 'WIDTH' set to 320, and 'HEIGHT' set to 240. The 'Active Time Interval' section contains three input fields: 'START' set to 0 h, 'END' set to 24 h (with '(0-24)' in parentheses), and 'MAX Active TIME' set to 60 MIN. At the bottom right of the dialog are 'Cancel' and 'SET' buttons.

- milyen időszakban aktív a kamera
- max. mennyi ideig használja a csatornát

Channel editor

Channel Editor X

CHANNELS

1
 2
 3
 4
 5
 6
 7
 8
 9
 10

11
 12
 13
 14
 15
 16
 17
 18
 19
 20

Camera Loop

Selected CHANNEL
 SET Status ACTIVE
 WIDTH
 HEIGHT

CAM Channels

	Camera ID		Height x Width Interval MAX		TIME (MIN)	
<input checked="" type="checkbox"/>	CAM 1	<input type="text" value="aldot"/>	<input type="button" value="View"/>	<input type="text" value="{320 x 240} -24 H : 60 MIN"/>	<input type="text" value="15"/>	<input type="button" value="SET"/>
<input type="checkbox"/>	CAM 2	<input type="text"/>	<input type="button" value="View"/>	<input type="text"/>	<input type="text" value="0"/>	<input type="button" value="SET"/>
<input type="checkbox"/>	CAM 3	<input type="text"/>	<input type="button" value="View"/>	<input type="text"/>	<input type="text" value="0"/>	<input type="button" value="SET"/>
<input type="checkbox"/>	CAM 4	<input type="text"/>	<input type="button" value="View"/>	<input type="text"/>	<input type="text" value="0"/>	<input type="button" value="SET"/>
<input type="checkbox"/>	CAM 5	<input type="text"/>	<input type="button" value="View"/>	<input type="text"/>	<input type="text" value="0"/>	<input type="button" value="SET"/>

Channel COMM paraméterek

Channel COMM Params

Settings

Channel BASE DIR Z:\WME\

Default COMM Mode Shared MEM TCP/IP Socket Named Pipe STD Pipe

Channel Name Prefix Capture D Name Prefix .AX

TCP/IP

Channel Server NAME/IP Server BASE PORT Start at

- Csatorna beállítások
- Capture driver-ek regisztrációja
- TCP/IP port beállítások

Channel Executer

- Channel felügyelő szervíz
- Channel status riport
- Channel status riasztás

The screenshot shows the 'Channel Executer' configuration window. It is divided into three main sections: Service, Report / Alert, and e-mail.

Service Section:

- Select Service [EXE]: Y:\CHM_service.exe (with a Browse button)
- Service NAME: CHM_1_20
- Buttons: Install, Start, Stop, Uninstall

Report / Alert Section:

- Send Report On Every 1 H
- Send Alert Inactive Channel(s) 10 MIN Restart 2 /H

e-mail Section:

- SYS Admin e-mail: dstudio@pr.hu Password: *****
- Mail Server SMTP: mail.pr.hu Mail BOX: dstudio@pr.hu

Buttons: Cancel, SET

Objektum/esemény elemző stratégiák

- komplex forgalmi helyzetekre optimalizált
- 20 elemzési mód

The screenshot shows a 'Processing Mode' dialog box with the following settings:

Settings
CAM ID: office_320x240

REAL-TIME Analyzer (CAPTURE mode)
• AI (selected) • Scanner • BLOB Tracker Use AI Use Scanner
Others: SM_Size 4 Frame Step 1 Reduce PM COUNTER
Speed: AVG DYN
 Object Counting and Classification ONLY Switch to CM at Night

POST Analyzer (FULL mode)
• AI • Scanner (selected) • BLOB Tracker Use AI Use Scanner
Others: SM_Size 1 Frame Step 1 Reduce PM COUNTER
Speed: AVG DYN
 Object Counting and Classification ONLY Switch to CM at Night

Buttons: Cancel, SET

BLOB Tracking

BLOB Tracking [X]

Settings

CAM ID: Use MM Use PixMap Use BLOBs

Motion Map

MM Only MM Luma
 Reference Luma MM w RefLuma

PixMap

Original Reduced /100

Blobs

CV_BLOBS BLOBS_LIB

FG/BG Detection

ACM MM2003 \$FGOS FG1

BLOB Detection

CC of FG mask BD_Simple

Blob Tracking

CCMSPF CC Mean shift \$MSFG MSPF

Post processing

None Kalman Filter

Cancel SET

Diagnosztika

Diagnostic [X]

Settings

CAM ID:

Debug LOG Events

Processing Mode

AI Scanner BLOB Track

AI

Parameters LUMA Change

Module Level

Contour MM Contour Threshold Color Space Reference Frame

BG Substraction Set CAM Config Capture Utils

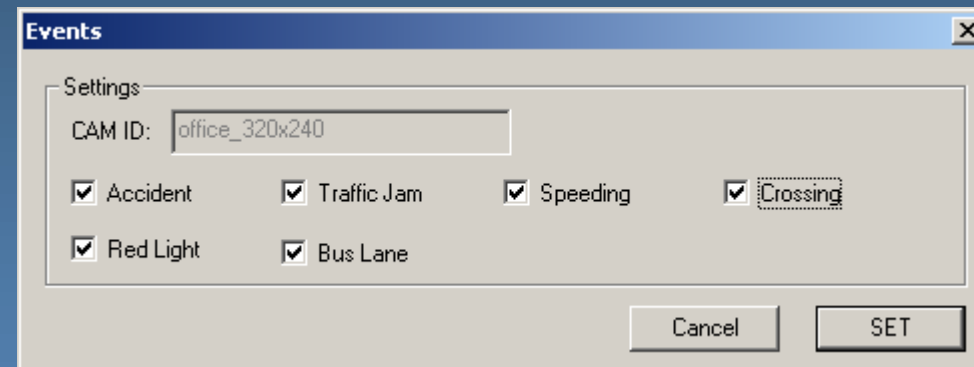
Motion LUMA Motion Scanner Process Optical Flow

CDMM STAT Gate XROI Lane OBJ Size

Speed ROI RMAP Geometry OBJ Dimension

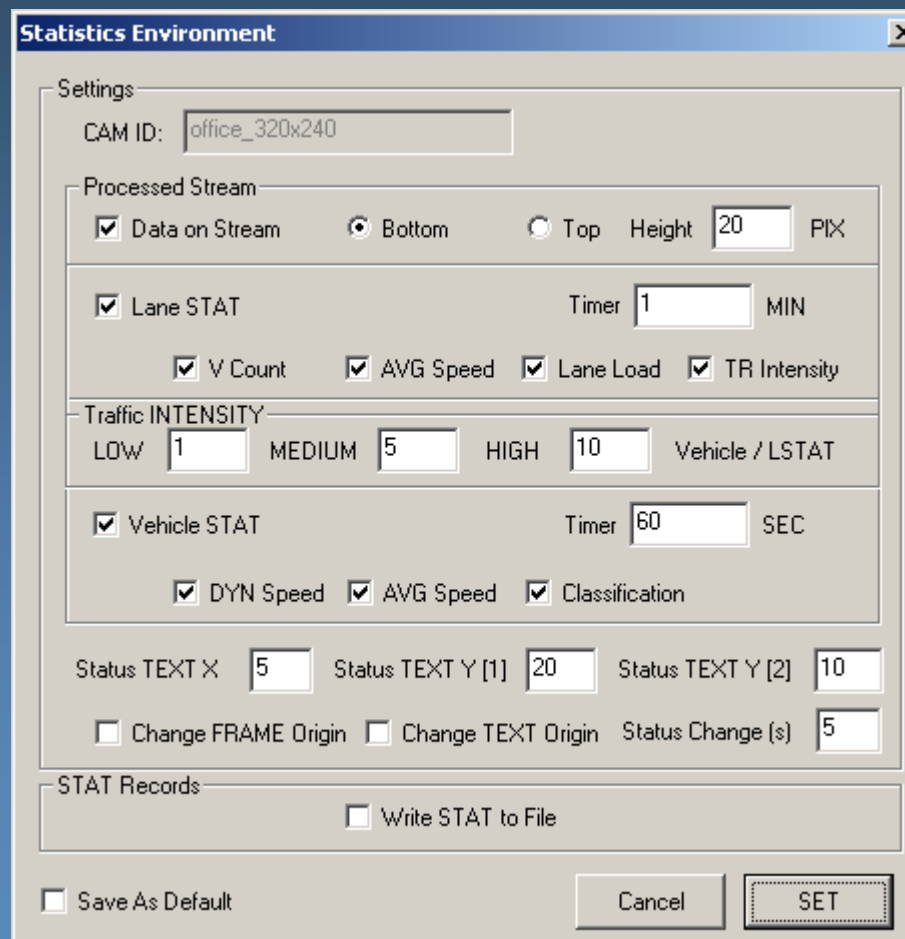
Események

- Baleset
- Dugó
- Gyorshajtás
- Gyalogos
- Piros lámpa
- Busz sáv



Statisztikák

- Statisztika felírása a stream-re
- Forgalom intenzitás határértékek
- Idő intervallumok



Statistics Environment

Settings

CAM ID:

Processed Stream

Data on Stream Bottom Top Height PIX

Lane STAT Timer MIN

V Count AVG Speed Lane Load TR Intensity

Traffic INTENSITY

LOW MEDIUM HIGH Vehicle / LSTAT

Vehicle STAT Timer SEC

DYN Speed AVG Speed Classification

Status TEXT X Status TEXT Y [1] Status TEXT Y [2]

Change FRAME Origin Change TEXT Origin Status Change (s)

STAT Records

Write STAT to File

Save As Default



Kapcsolat



info@sensor-tech.hu
