

## ALPR – Motorola Demo

### ALPR Unit

Takes two photos, IR (day or nighttime) and color (vehicle)

Each ALPR unit has one fixed focal length, for either 10, 30 and 50 feet distances

The units are not adjustable for focal length

10 foot focal length would be useful for a parking lot, 50 foot focal length would be useful for reading vehicles on the street or highway

The ALPR must be configured for the reflective quality of one type of license plate (license plate covers likely negate the ability of the ALPR to read a plate)

### Software

The PAGIS software consists of OCR capability that will “read” the plate

The software will compare license plates against a database of plates manually loaded to each squad car’s laptop

The software must be prepped to process the license plates of one specific state

(Over 200 different fonts are used on US license plates)

The vehicle plate database must be prepared by agency and may consist of NCIC data, state license plate data, hot list files, local wanted violators, Amber Alert plates, etc.

Any addition to plate database, until next download, must be manually entered into each squad laptop

The software does not generate queries to NCIC, but compares recognized plates against the database on a laptop

The software will save plate data to storage on the laptop

“Hits” against the data are sent only to the individual squad laptop on which the ALPR read the plate

Partial plates are not handled by the software

GIS capability is an add-on. That is, recording of squad location at the time license plates are read is not included with the ALPR. (This means additional software, Systems staff programming and database structure must be modified)

### Query Capability

Motorola has no records keeping or query application for the data

The saved plates must in turn be loaded in to a database if you later want to run queries against the saved plates

Queries must be run in Crystal Reports

(This means the user agency must write its own queries, i.e., there is no user interface, like RMS, for a variety of users in different units to query the collected data)

Crystal reports requires a programmer to formulate queries

Crystal Reports queries can be saved to be run later

SPPD will need police staff to be trained in Crystal Reports

Modifying the queries must be done each time a new search criteria is used or a previous search criteria is modified

Unknown if additional data on user squad or assigned district is saved with license plate data (Motorola will follow up on this question)

#### Location (GIS) Capability

Software to provide location data on each recognized license plate requires the addition of GIS software to record the location of each plate and enable mapping of the plates

#### Cost

Cost is about \$10k per vehicle. Stationary ALPR units are about \$12k per unit

#### Other

The data is "read" at times. When the plate is first recognized or later after the data is downloaded and queried.

Even at "60 fields" per second the ALPR will not read all plates passing an ALPR unit. Just what does 60 fields per second mean? Is this referring to all newly read data, i.e., plate, plus other data recorded at the time a plate is read: squad number, time, CN, LPR unit? Or does 60 fields per second refer to queries against database fields that are matched to a plate? Or both?

The presenters did not say the data could be uploaded to a central license plate database. It sounds like this is an individual process for each user after each shift of ALPR use.

There is not current real time updating of the data base even over a wireless network. This is done laptop by laptop for each update.

#### Overall

It looks like there is a great deal of programming to be done to make this work. (Vehicle plate database, data and image database, queries via Crystal Reports)

The device software must be configured to read plates from only one selected state  
Updates to "wanted" plates database during a shift are strictly manual entry for each ALPR unit

Data collected on read plates must be manually loaded in to a database for query/search via Crystal Reports

Shortcomings of the product are an inability to recognize license plates from multiple states and the lack of an user friendly application to query the accumulated data.

LPR

Setup and install in (1) unmarked and installed software on (6) squads in the Districts

Laptop – Panasonic CF-30	
Tough book, touch screen	\$3,800.00
Mount -	\$350.00
Aircard -	\$40/mo (\$640)
Tax	\$148.14
<b>Subtotal:</b>	<b>\$4,938.14</b>
Server -	\$6,300
I.P Address -	\$0
WiFi OEM	\$0
Tax	\$409.50
<b>Subtotal:</b>	<b>\$6,709.50</b>
<b>MPH900</b>	<b>\$25,298.00</b>
<b>3 camera</b>	
MapPoint	\$300
MobileKOP	\$0
IPASS	\$80
NetMotion	\$163
McAfee Anti-Virus	\$0
Tax	\$1,679.67
<b>Subtotal:</b>	<b>\$27,520.67</b>
Annual Maintenance -	\$3,216 (through 2010)
Tax	\$209.04
<b>Subtotal</b>	<b>\$3,425.04</b>
<b>Total</b>	<b>\$42,593.35</b>
Remaining	\$2,406.65