Proposal for Highveld Steel & Vanadium Plant
Mapumalanga Region
Mapumalanga

for

Advanced Digital Vehicle Weighbridge Monitoring Solution: System Proposal

Compiled by Frank Maass
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Friday, 06 May 2005

Supplied by

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In conjunction with

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1 Confidentiality Clause

Friday, 06 May 2005

Due to the strategic importance of this work it would be appreciated if the contents remain confidential and not be circulated for a period of two (2) years.

Sincerely

Signed……..

Date…….Friday, 06 May 2005

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2 Declaration

This research is done specifically for:

Highveld Steel & Vanadium Plant
Mapumalanga Region
Mapumalanga

Date: Friday, 06 May 2005

The opinions expressed in this document are the views of the authors alone and do not necessarily reflect those of the views of RAW Fire & Security, management, employees, or any other party. Numerous assumptions have been made and many of these would have to be validated at the commencement of the project.

Signed……..

Date…….Friday, 06 May 2005

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3 Acknowledgements

We would like to thank the following for assistance:

Barry T. DUDLEY I-CUBE (I3 - Integrated, Intelligent, Imaging)
(MBA {IT}; MSc {Image Analysis}; BSc {Brewing}; BSc Hons {Waste Technology})

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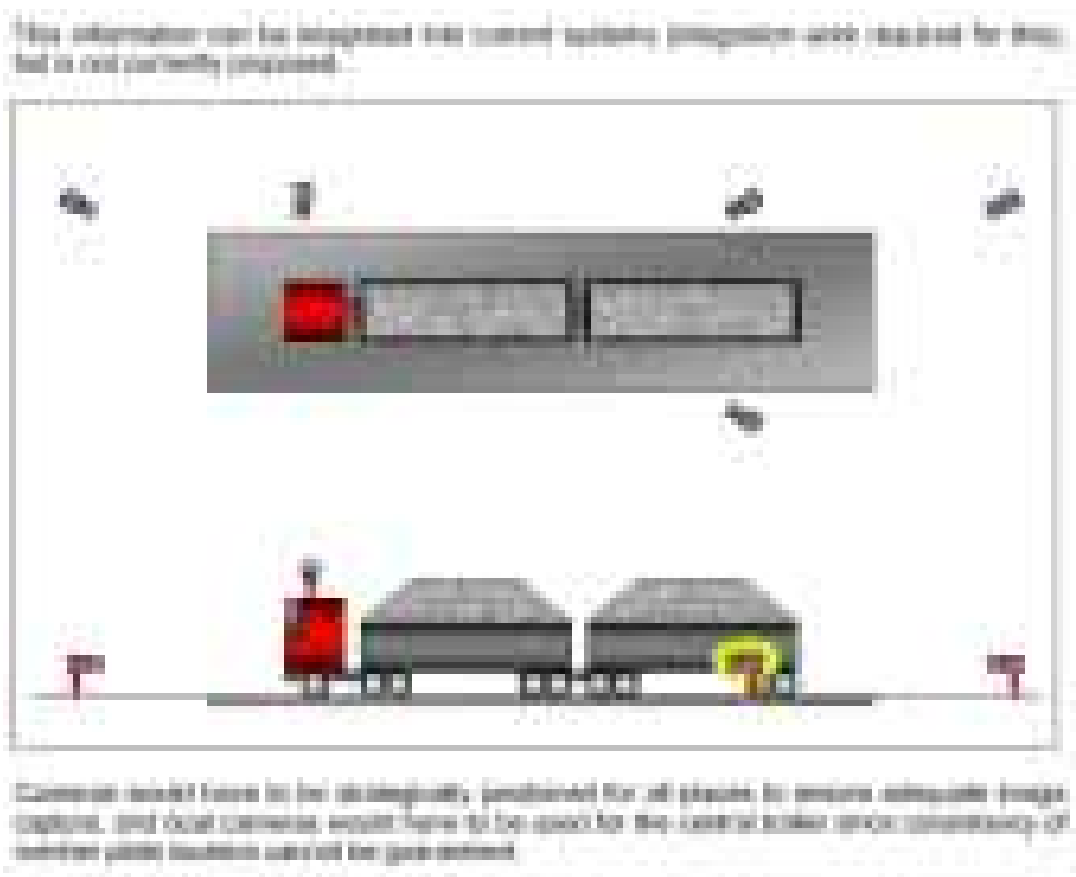


4 Summary

WEIGH BRIDGES engage in a constant battle to use technology to enhance their competitive position and detect and prevent crime. In order to overcome the problems associated with being at this technological edge, RAW FIRE & SECURITY and partners select rock solid technology and integrates and supports the technology. Implementing the enclosed solutions will allow all role players to gain a competitive advantage in terms of marketing, customer relations, security and surveillance.

In order to overcome the problems associated with entry and exit operations where management cannot be present, the possession of accurate information regarding what occurs, as well as a way to quickly and accurately obtain that information, is crucial. License Plate verification, possibly linked to an Impro access card, of all staff on entry and exit allows only those authorised to gain entry, logging all movements. RAW FIRE & SECURITY will supply and install the latest digital video technology that will provide a tool that will dramatically change current operations for the better. With the LPR ALARM software any contractor, suspicious vehicle or image captured on existing DVR's will be immediately searched against the "suspects" database immediately identifying the person if present.

The proposed solution consists of cameras connected to a digital recorder, which will allow both a real-time and recorded view of the entry and exit lanes, linking all vehicle number plates to the access Trucks, colour of the TRUCK, driver and video footage. On exit, if the access Trucks links to the license plate, driver and the TRUCK colour, the boom will open. If not, the operator will be alerted and security can investigate the discrepancy.

As specialists in integrated intelligent imaging, we propose the attached solution, which, if implemented correctly, has the potential to enhance some of your existing security services, unlock additional potential and, hopefully exceed your expectations.

The License Plate IDENTIFICATION linked to weigh bridge monitoring and access control solution allows: -

- Image trigger via a loop on the road;
- Multiple image capture by a high resolution black and white camera;
- License plate finding within the image;
- License plate number reading at an accuracy over 99.95% (with multiple cameras used in stereo);
- Linking of the license plate with TRUCK colour and shape;
- Linking of license plate number with a name and display of this information on ELECTRONIC DISPLAY (if present) when the vehicle is detected;
- Log of number and image of all vehicles and driver who enter and exit the facility;
- ♦ Image capture of the person from a high resolution colour camera;
- ♦ Face finding within the image;
- ♦ Searching central database and display of results;

Entry of all images and details that are not in the database Linking of the face with various fields (ID no. And name) for entry into the suspicious persons database;

As leading specialists in using visual technology to solve customer problems and increase profitability we propose the attached solution.

This solution allows management to BE EVERY WHERE AT ONCE and focus on

- ✓ Productivity improvement,
- ✓ Loss control,
- ✓ Vehicle monitoring,
- ✓ Safety management,
- ✓ Ensures that staff and managers spend time where they are needed most.

This Digital Management Solution will be implemented into your business to help you better manage your business and in the long run improve your profits through increased productivity levels and better work practices.

With RAW FIRE & SECURITY Digital Management Solutions you will have better control over access control, DRIVERS, deliveries, contractors and staff.


Clever cameras have your record

- Implementing our digital system throughout your premises will give you a visual audit trail of Trucks, giving you much more material to work with when making managerial decisions.

The system doubles as a security and Visual Management System, and since it's an "open architecture system," other compatible systems can be incorporated into your system.

RAW FIRE & SECURITY specialises in integrated digital CCTV Management Systems that are designed according to each client's unique requirements and specifications. Intelligent digital CCTV management systems by RAW FIRE & SECURITY presents operators only with the information that they need to re-act upon and provides management with instant retrieval of vital recorded footage. The RAW FIRE & SECURITY option is not simply a security system, it allows management to focus on productivity improvement, loss control, safety management, procedure audits, equipment maintenance, time and motion studies and ensures that managers and security staff spend time where they are needed most in their operational functions.

In the rapidly changing digital world it is important to understand that information and the rapid and efficient interpretation of this information is the key to effective decision-making. RAW FIRE & SECURITY provides the artificial intelligence on a digital platform to turn "Images to Intelligence". Customised application specific algorithms provide real-time processing; detection, storage and rules based decision support systems of pre-configured events, with the added advantage of being able to artificially interrogate the recorded database. In essence these systems automate security, process and inspections within an operation, reducing manpower and the inherent human failure.

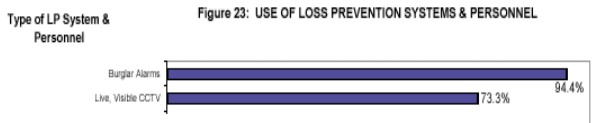
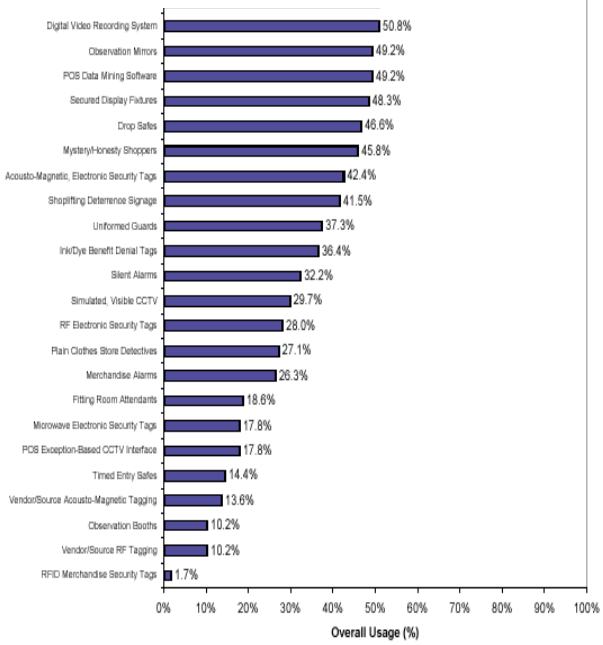


Figure 1 Use of CCTV systems are on the increase



A 12-month guarantee is applicable in respect of all equipment installed and workmanship. A separate maintenance contract can be negotiated for the balance of the rental period after the expiration of the guarantee period. The system requires either 12V or 220-volt plug points and sufficient light for the cameras, although the cameras quoted on have a low light specification. All training to the relative users of the system to the point of competency is provided at no additional cost.

Thanking you in anticipation of the quotation being accepted and your instructions to proceed with the compilation of the rental documents and thereafter installation of the system. Please be assured of my best attention at all times.

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Friday, 06 May 2005

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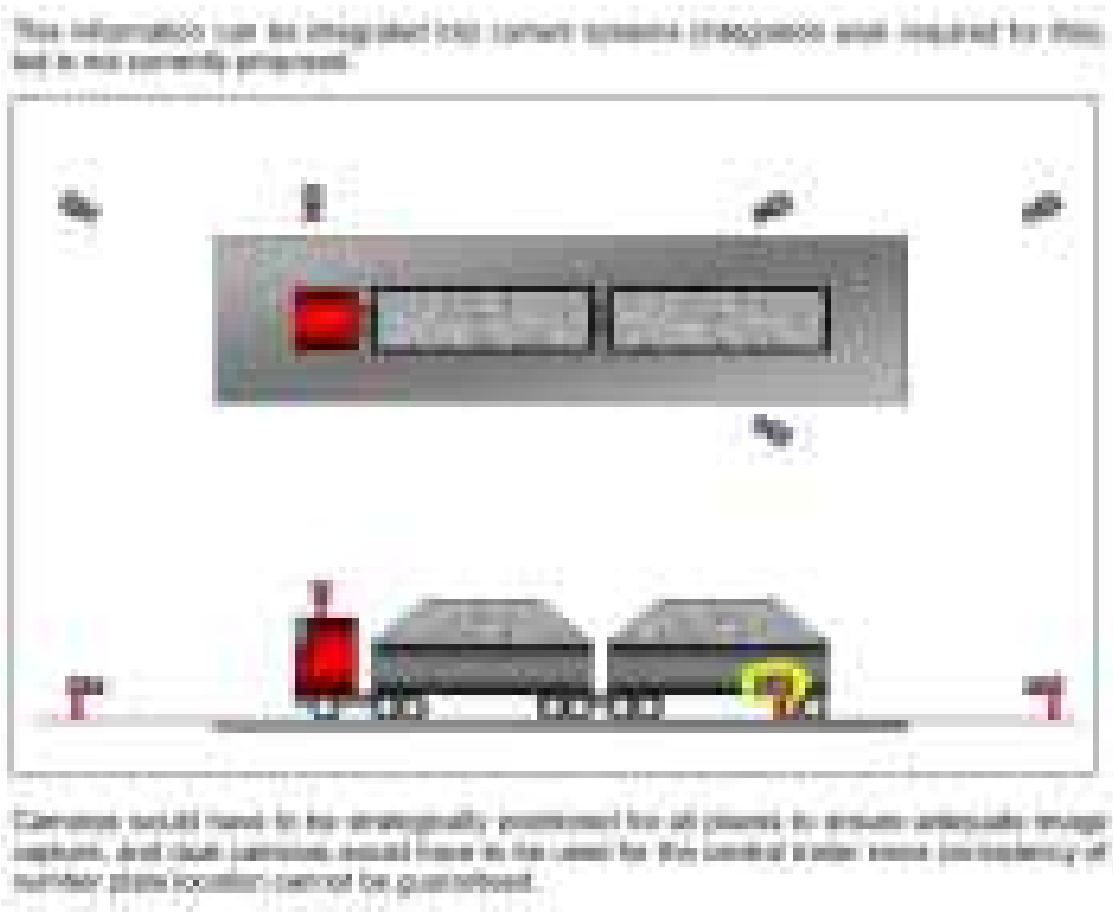
5 Description of Requirement

The requirement, as stated, is for monitoring (linking weight, truck, license plate, overall view of the TRUCK area and possibly driver facial image) and access control to a WEIGH BRIDGE.

The weighbridge has one lane IN:

- Where LINKING of license plate with weight of the vehicle will occur
- And possibly monitoring of truck, contents, overall view, drivers face etc. could occur

The requirement is to provide Licence Plate IDENTIFICATION (LPR) technology to facilitate the MONITORING OF vehicles and associated drivers entering and exiting the WEIGH BRIDGE.



6 Issues for Consideration

There are a few points that should be borne in mind during the compilation, review and assessment of this proposal and the subsequent manner in which this will progress should your decision be favourable to move forward:

- This proposal outlines what can be done in order to address the stated requirements and does not delve into too much detail. (Although much of the detail is supplied in the Appendix.) The detail regarding the actual implementation process is not addressed, but is estimated in the Financial Considerations section.
- Our philosophy for solution crafting highlights the fact that all solutions consist of 4 primary elements: people, process, technology and information. The technology aspect is addressed in this proposal. The other aspects are normally addressed in the project scoping workshop which will typically commence once there is agreement to proceed.
- The success of implementations of this nature is dependent on a formalised project approach where expectations and deliverables are clearly expressed, recorded and agreed. Ensuring open dialogue prior to implementation allows for all parties to ensure that all parties agree. Scope management is also crucial to ensure proper implementation. We all know what assumptions do and are!
- A medium level project schedule with project report will be supplied after the project kick-off session.
- There is existing equipment that may be used in this solution offering, but we have not considered this at this time. This will be reviewed at the kick-off session where all the existing cable and equipment will be assessed and integrated where possible.
- There may well be some information that has been omitted as a detailed site inspection has not yet been conducted.
- There are direct benefits to security, legal matters relating to security breaches, operations, as well as an additional marketing tool to enhance value to owners.

7 Solution Proposed

The proposed solution would enhance the image of the WEIGH BRIDGE and would also provide some practical enhancements to the day-to-day operation. The offering to address the stated requirements will be tackled as a complete entity but can be phased or broken down into its components and implemented as separate items, if required. Some technical terms will be used and a glossary of terms is supplied as an Appendix to this document to assist with understanding (should it be required.)

7.1 Solution Design

A basic matter of understanding the difference between Identification and Verification is crucial for the development of appropriate solutions.

- **Identification** is the assessing of the TRUCK or object presented for identification and attempting to derive a match from the repository of information (typically a database). This process requires a search through a database and the search can be sequential or can be built on certain criteria to ensure more effective lookup. It is a one to many review.

- **Verification** is the process whereby an item for identification is presented, either a PIN, proximity card or ID, and an additional criteria is used to validate that the TRUCK presenting the item is actually who they are claiming to be. This is a one to one review.

Each of these options are possible with the technology proposed, but each requires a different approach to the actual implementation and the associated processes.

7.1.1 Vehicular Traffic

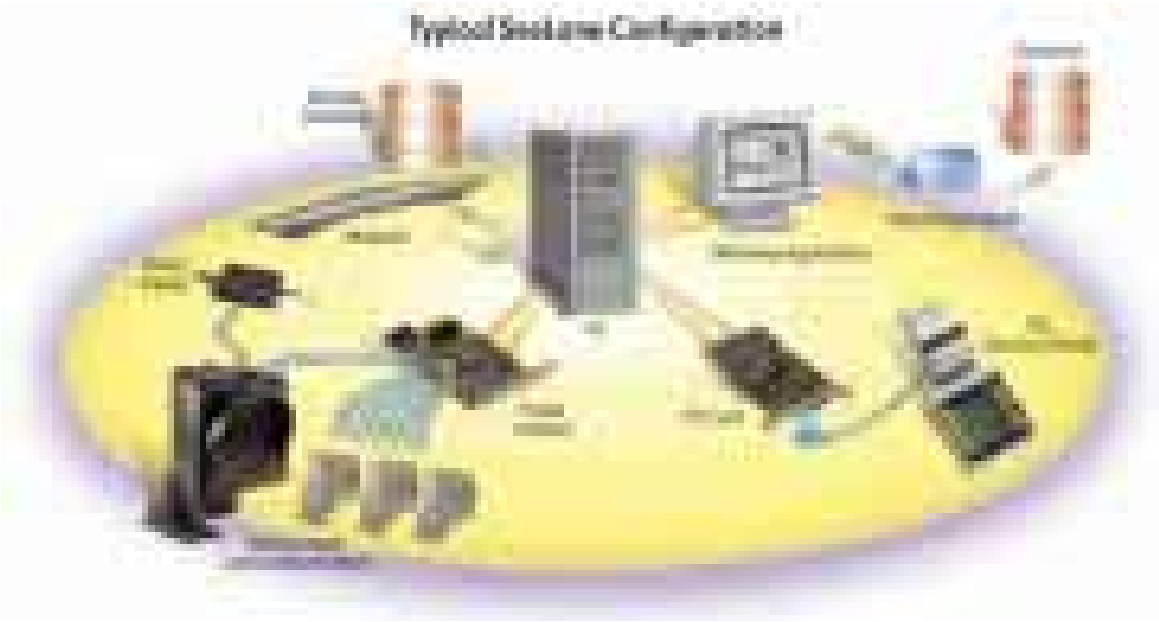
This specific system will allow for the capturing and analysis of images of licence plates, front and rear (which would also cater for trailers) to ensure an accurate record of vehicles entering and exiting the WEIGH BRIDGE. Each vehicle could be classified as employee, owner, DRIVER, contractor, supplier, etc. Rules for access could be defined for each vehicle and access could be granted accordingly.

The system proposed would analyse the licence plate – for the match and would then operate the boom. If there is a discrepancy, then the security personnel will be alerted and appropriate intervention will then take place.

When DRIVERS are scheduled to arrive, security can be contacted to enter the registration of the vehicle into the system and when the TRUCK arrives access is allowed and a welcome message displayed on the visual display (if supplied). Access for DRIVERS can be defined for the period that they will be there and, while the record will still in the DB, it will be in a status that would recognize but not allow access.

Facial IDENTIFICATION could be added to this to further enhance the system to ensure that there is a match between vehicle and designated driver. It will be possible to link multiple drivers to multiple vehicles so the system would not be restrictive from that perspective.

The idea is to remove much of the responsibility of assessing vehicles entering to dealing with the anomalies and allow normal authorized vehicles to proceed without delay.



LPR WEIGHT BRIDGE COMPONENTS

The main system would be employee on a server controlling the process. This would house the database as well as the application that handles the analysis. It would be linked to a trigger mechanism (either a loop at the entrance or the presentation of the proximity tag), the boom and the various cameras.

OPERATIONAL ISSUES

All WEIGH BRIDGE personnel, owner and employee vehicles would initially need to be registered on the system and an appropriate mechanism for doing this would have to be agreed with the MINE and the various stakeholders.

Contractor and supplier vehicles would also need to be registered through a similar process and rules governing their access rights would need to be agreed.

Processes for DRIVERS and ad-hoc entrance would also be agreed and would need to be implemented.

In Summary …
The License Plate IDENTIFICATION and facial capture solution allows: -

- Image trigger via a loop on the road;
- Multiple image capture by a high resolution camera;
- License plate finding within the image;
- License plate number reading at an accuracy over 99.95% (with multiple cameras used in stereo);
- Linking of the license plate with an access card;
- Linking of the license plate with TRUCK colour and shape;
- Linking of license plate number with a name and display of this information on ELECTRONIC DISPLAY (if present) when the vehicle is detected;
- Log of number and image of all vehicles and driver who enter and exit the facility;
- Facial capture and verification on exit (if requested);
- ♦ Image capture of the person from a high resolution colour camera;
- ♦ Face finding within the image;
- ♦ Searching central database and display of results;
- ♦ Entry of all images and details that are not in the database: Linking of the face with various fields (ID no. and name).

7.2 Face IDENTIFICATION System Description

The Face IDENTIFICATION System is used to assist in identification.

The surveillance operator manually compares the live or recorded images and the saved facial images against a database of previously saved face images, with an operator reviewing the results and making the decision. This means that the accuracy of the system is NO LONGER crucial, as the system presents information to a human operator to make the final decision. One is using the face IDENTIFICATION system to check if the person has been seen before, with the operator looking at the results to check the match. This is due to the fact that the following affect the results of ANY face IDENTIFICATION system: Lighting, quality of original image in the database, temporal affects (time and ageing), glasses, hats, shadows, hair style or lack of hair, background, size of face in the image, and a WIDE RANGE of other environmental conditions. One is using face IDENTIFICATION to assist in IDENTIFICATION of repeat trouble makers, illegal entry, shop lifters, bad check passes and then the operator decides on the appropriate action to follow.

8 HARDWARE

8.1 System description: *PC-based multi-lane LPR system designed for low speed trucks on a weighbridge.*

Item	Qty
PC	
P4, 2G Hz, 512 MB RAM, 19" SVGA Monitor, Windows XP	5
Keyboard and Mouse Switch	5
Cabling per metre, supply and install	5
Commissioning	0
SUB-TOTAL	
NPRS	
See Lane System - ONE (1) LANE STEREO	5
GEOVISION DVR	5
Loop Controller	5
RELAYS - 5VDC 30 MA	5
On site installation and support	1
LPR Software Config	1
Training	1
SUB-TOTAL	
Video Installation	
Camera installation including back box , rawbolts, focusing and set-up	0
RG59 installed	0
RG59 Crimp connectors	0
Cable Cabtyre 3 core 1 mm Installed	0
Cable Cabtyre 3 core 2.5mm installed	0
Sundries	0
SUB-TOTAL	
Rack and UPS	
8 KVA 2 hrs Backup with manual override	0
25U 19" rack, 800 deep. Keyboard tray and keyboard included. 3 x modem trays. 10 x dedicated power supplies. 2 x fans. 1 x brush tray.	0
Rack preparation	0
Sundries	0
SUB-TOTAL	
Digital Video Recorder	
Digital recorder (GEOVISION) - 4 input	5
IO & Contact Boxes	0
SUB-TOTAL	
Containment and PSU	
25mm bosal installed /m	0
204 Box	0
204 Box mounting kit	0
20 mm adaptaflex	0
20 mm adaptaflex connectors	0
Electrical sub db installed Dirty power	0
Electrical sub db UPS with 16way box and CB's	0
Sundries	0
SUB-TOTAL	
Electronic Display	
Display Board software	0
Display Board, excluding installation	0
On site installation and support	0
SUB-TOTAL	
Facial Identification	
FID	1
Total	

8.2 Additional Items

All events will be captured on a digital video recorder to allow access to real time and historical records.

8.3 Normal process from here …

The standard process after due consideration and finalization of various components is to formalize the agreement to move forward with an order to commence the project. This would take the form of either signed acknowledgement of acceptance of the proposal, a letter indicating acceptance or a formal order number.

Standard Ts&Cs do apply but these will be reviewed depending on what is accepted.

A formalized project "kick-off" meeting would be arranged at the WEIGH BRIDGE where we would discuss in detail the solution proposed and determine exactly what will be deployed where, and also understand the areas of responsibility for all parties involved. The typical Project documentation will outline the following:

- Detailed scope of work
- Finalization if the design
- Responsibilities of all parties
- Expectations
- Deliverables
- Timings and milestones
- Financial aspects
- Requirements for communication
- Assumptions, concerns, etc.
- Exclusions
- Risks and how they will be addressed
- Personnel development/training
- Commissioning and implementation schedules
- Standards that must be complied with

… amongst other things

Once the plan is agreed and signed, final equipment orders will be placed on the manufacturers and the project planning will be completed.
Equipment installation will commence in accordance with the determined schedule as well as with the receipt of the equipment.
Once installed the system will be commissioned.
All training will then be finalized to ensure that staff are fully appraised of the operational and support issues.
The system will then be "made live" and operationalized.
Final project sign-off will then take place.

Conditions

- All prices are quoted in South African Rands and are quoted at a rate on US$1.00 = ZAR6.00 and are subject to change.
- Proposal is valid for 30 days after which the pricing and product availability may well have changed.
- Prices quoted are excluding VAT
- No installation nor commissioning has been quoted due to the unfamiliarity with the environment.
- Maintenance will be quoted separately.

8.4 Acceptance

Customer Acceptance

CUSTOMER: _____ **VENDOR:** **RAW FIRE & SECURITY**

Signature: _____ Signature: _____

Name: _____ Name: _____

Title: _____ Title: _____

Date: _____ Date: _____

Specific considerations

Please sign and fax this page to RAW FIRE & SECURITY

8.5 Standard Terms and Conditions

Available on Request

9 Rental Option

9.1 BENEFITS OF RAW FIRE & SECURITY RENTAL

Many of our customers ask whether it is better to buy **Cash or Rental**. However when buying high tech electronic equipment one has to remember that with today's pace of development that obsolescence needs to be taken into account. Because the equipment is computerized and networked we are totally dependent on the likes of Microsoft. This means that the **average lifespan of computerized equipment is 3 Years**. The receiver of Revenue has accepted this; hence all computer equipment is depreciated over a 3-year period. The present **trend for the increasing cost of importing such technology is averaging between 20-30% per annum** and does not make it financially viable to purchase a new system every three to four years. This is a conservative estimate and is due to a number of factors such as the poor exchange rate. It is therefore ***not recommended to pay cash*** for a hi-tech system like this as the capital will be tied up in a technology that has little equity and will be superseded within a three year period.

Due to the rapidly advancing nature of the computer technology used in our systems it is our policy to Rent our own locally developed and manufactured systems that will continually keep our customers abreast of the latest developments at affordable Rand based rates. This is achieved by phasing in minor software upgrades over the Rental contract period. We will however offer an ***entire software and hardware upgrade after the initial three-year period***. To achieve this RAW FIRE & SECURITY will cancel the outstanding twenty-four rentals on the old agreement upon acceptance and approval of a new five-year rental agreement, which will be kept at an acceptable and competitive rate. Whereby the latest updated system will then be installed.

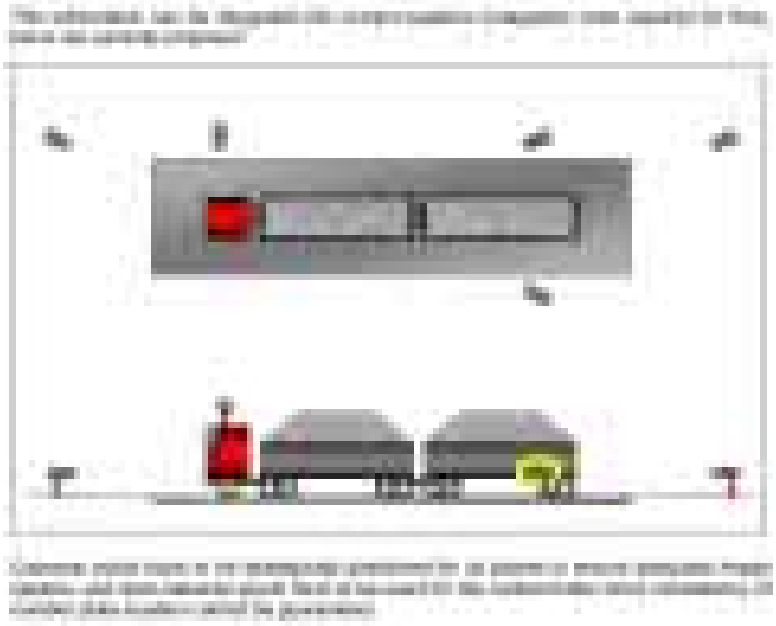
The choice of a 0% or 12% escalating Rental agreement remains your choice. However as this is a balloon rental the **end total is the same**. It therefore does not give any benefit to pay the higher non-escalating rentals in the beginning due to the fact that we will be upgrading the system at the three-year period. Furthermore due to the fact that the goods remain the property of RAW FIRE & SECURITY and do not become an asset to the customer there is no point in paying off the goods. Unlike the traditional lease rental, which reflects as a liability on the customers' balance sheet, the RAW FIRE & SECURITY Rental is a **pure off balance sheet operating expense, which is 100% tax deductible**. This **alleviates the admin burden** of financial asset management, and depreciation, and furthermore frees up much needed capital and existing WEIGH BRIDGE facilities for better use within your business.

Quote from the September 2002 issue of UPFRONT

"…. Computer equipment in particular is the most rapid depreciating asset in South Africa. …. Market used equipment and it becomes understandable why most financial institutions attach a zero value to all used digital equipment."

10 Conclusion

RAW FIRE & SECURITY will supply and install the latest digital video technology, including advanced license plate IDENTIFICATION linked to weigh bridge data. The latest LPR technology will be provided as a tool to verify truck entry and weight on a weighbridge. We believe that the RAW FIRE & SECURITY solutions will grab the attention of all role players, leading to the focus on productivity, damage reduction and increased information flow, allowing a safer environment.



We deliver ROI-driven solutions that leverage video and control technologies to increase profit by eliminating inefficiencies and unproductive resources. We also provide customers an efficient way to secure their business environment, reduce costs and ultimately drive profit. Information Technology has become so integral to success that it is now not only a support function, but could plays a proactive and vital role in realising the business role. We offer technology solutions and services that allow customers to efficiently integrate, manage and maintain their people, processes and assets. Our adaptive infrastructure becomes increasingly critical to business success, balancing agility, robustness and affordability. By understanding the problem, we can address the solution. By reviewing what is occurring around the world, and customising this to your specific needs, w provide a complete solution.

The cost of technical solutions to maintain the gap ahead of the competitors, and to continue fighting crime is expected to keep rising steadily over the next few years. To compete for investment dollars, we allow you to employ techniques like infrastructure pattern matching (reusable design), infrastructure impact assessment (analysing reuse), predictive cost modelling (total cost of ownership and budgeting), and application subscriptions (service-level-based packaging). Moreover, users cannot afford to wait until full deployment for a quantifiable return on investment. Each phase in the installation is justified by its own standalone ROI. Moreover, look closely at the effect the shift to the proposed infrastructure will have on near- and long-term infrastructure efficiency, image and customer satisfaction

Appendices

11 Introduction - Role Players

11.1 Introduction

The role players involved with the selection and implementation of an integrated LPR system, which can involve security, mining management, marketing and CCTV surveillance systems, need to involve all departments. However, the role players affected have a variety of criteria they might apply to the selection of a solution. Within the WEIGH BRIDGE there are at least four primary areas that would be affected by the introduction of facial IDENTIFICATION monitoring techniques. These are:

- Marketing (improving the experience of the DRIVERS by recognising important guests);
- Security (ensuring the safety of people and property);
- Operations (LPR systems have a crucial role by speeding up identification); and
- Legislative (identification of any threat to the WEIGH BRIDGES by thieves, terrorists or con artists).

11.2 Marketing

The marketing department could use these proposed solutions to enhance the brand building experience to the benefit of the WEIGH BRIDGE. This would build DRIVER confidence; loyalty and satisfaction, lower marketing costs, increase margins, and provide an opportunity for brand extension (Schrage, 2003). The LPR techniques must be able to be used to increase the loyalty of the users of the WEIGH BRIDGE. Please see the MBA dissertation (Casino Exclusion Technique Exploration - Framework Development by Barry T. Dudley) for detailed views of this role player (Send e-mail to mba@i-cube.co.za to request a copy. A PDF file of 2MB will be sent to your E-Mail address).

11.3 Security

Example of Cape Access Control

The concerns of security are often at odds to the rest of the role players. Is Khayalethu Makhotyana (in the figure below), making the best utilisation of limited resources? Currently security places a high emphasis on the reaction to events, rather than being proactive.

We believe that the proposed system can be spark, which could propel security, to become a greater strategic ingredient. Rather than reacting to outside forces, the security department could lead the way in solving the problems. Tradeoffs exist among product and process choice versus the longer-term operating choices regarding quality, efficiency, schedule, and adaptability (Adam & Ebert, 2001). The first users of these LPR systems in South Africa have already successfully applied, managed and maintain a solution, thus earning the respect of all the role players.

Throughput rate requirements for both enrolment and operation will affect the successful implementation. Almost all systems require enrolment, with some techniques requiring multiple enrolments. One will have to provide personnel for the use of the exclusion technique during operation, to observe or operate the system and users.

11.4 Operations

The application of security and monitoring techniques as proposed will lead to an increase of core competence. The security department needs to grow with the use of surveillance equipment, this is a subsystem and the combination of skills, processes, technologies and assets which come together within each subsystem to confer sustainable, repeatable and unique competitive advantage. It is essential to plan and execute new categories, which continue to build and reinforce these competences? The solution proposed allows this to occur, growing as the security department gains confidence in the equipment and the application thereof. The security department has to remain current with the external threats posed, such as tips on how to avoid detection by the surveillance cameras (Tamburin, 2003).

Please see the MBA dissertation (Casino Exclusion Technique Exploration - Framework Development by Barry T. Dudley) for more information.

Cameras used to potentially recognise thieves and prevent illegal entry.

Current system that allow abuse

11.5 Legislative

Mines need to do everything in their power to prevent thieves from entering the WEIGH BRIDGE area. Mines who do not take their public role seriously are quick to feel the backlash, with serious consequences against those who are found to have a problem. Implementing the proposed solution allows the Mines to show that they are doing everything in their power to prevent criminals, con artists or terrorists from gaining access.

Please see the MBA dissertation (Casino Exclusion Technique Exploration - Framework Development by Barry T. Dudley) for detailed review of all exclusion techniques (Send e-mail to mba@i-cube.co.za to request a copy. A PDF file of 2MB will be sent to your E-Mail address).

12 LPR Scope Of Work

To supply and install a digital video surveillance and management system, based on LPR and facial IDENTIFICATION, that will provide authentication of the vehicle and video images of the entry and exit of all vehicles, the driver, vehicle as well as general surveillance of the access area. The LPR system would replace security manually entering the data. The LPR information would come from an image captured on the DVR, via DDE. All drivers' facial images and vehicles would be captured, allowing for immediate recall and review. The LPR system allows the driver to be identified immediately if the guard has any cause for concern.

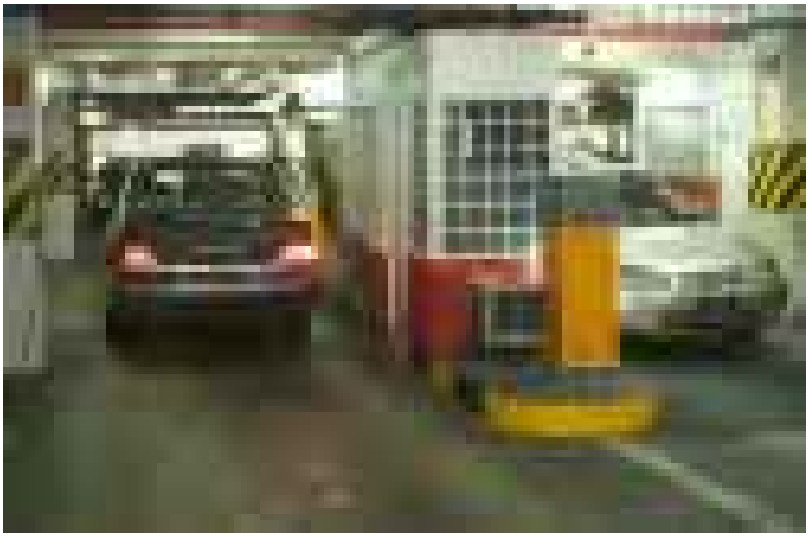


FIGURE: Currently existing parking LPR solution

Sample of system accuracy where read seq. is set to 100%

CHEP LPR RECOGNITION RESULTS

	%	Number
Confirmed Recognition	**99.90**	**18136**
Recognition per event	**95.5**	
Entry event	**1.5**	**290**
Hyster triggers	**1.5**	**290**
Dive round triggers	**0.8**	**160**
Unknown reason for trigger	**0.0**	**2**
Entry recognition	**0.0**	**3**
Incorrectly ID	**0.1**	**19**
REVERSING	**0.4**	**70**
Vehicle driven out while 2nd vehicle on loop	**0.2**	**30**
MISSED DUE TO SYSTEM OFF		**5**
TOTAL	**100.0**	**19000**

12.1 Full description of system topology offered

Field LPR engines connected to the LPR cameras by frame grabbers (6 inputs) capture the images and process the information from the Parking Garage, the result of license plate IDENTIFICATION and facial and vehicle colour capture. This information and the images are transmitted to the central server, by the network, immediately being available for review and reaction by any of operators at the operator stations.

Each field system can operate totally independently, and will update the central server as soon as this becomes available. As such, the HOT list is downloaded to each field PC, so no illegal / unwanted vehicles might use the weighbridge.

System Architecture: The License Plate IDENTIFICATION product is a turn-key system comprises of the following elements:

- a **PC Pentium** running Windows 98/NT/2000
- **See/TRUCK DLL** - which is used to analyse the images and extract license plate string.
- Camera/Illumination unit to capture the images (See/TRUCK/Head –LPR camera and illumination unit)
- **a Frame Grabber** - which captures the images from the camera units (handles 1-6 lanes)
- **I/O TRUCKd** – input/output board with multiple I/O discrete lines. This board supports the sensors, illumination control and optional gate-open signal. It is connected via a cable to a terminal interface board with easy connections and indicator lights.
- **Sensors** to indicate the presence of the TRUCK (a sensor for each lane)
- **See/Lane** The See/Lane Windows application interfaces the hardware elements (frame grabber, camera/illumination unit (s), IO TRUCKd and sensor). It controls the illumination, reads the video inputs and passes the images to the DLL in order to obtain the IDENTIFICATION results. The application displays the image and IDENTIFICATION results. It then exports the results using serial communication, messages or disk files. Its man-machine interface supports on-line setting control, which can easily adapt the application to various types of configurations.

The camera is triggered by the loop in the road

SeeParkClient is an application that is used to monitor a parking lot (secured area with a specified number of entrances and exits). This application records the entrances and exits in a simple flat database, and uses the information to match events using the POF string.

To share the results (pass the remote data to the centers), an additional utility - **SeeData** - is used to pass the IDENTIFICATION results and copy the image files to the Center. The product runs on basis of TCP/IP and sends the data across the network. It is consisted of two parts: one running on each remote unit (as a background application), while the other part runs on the Center Server (also as background application). The product can also send back

commands from the Center to any remote lane in order to activate a sensor or command to open a gate.

To simplify the maintenance of our products, our **SeeMonitor** tool monitors the operation of cluster of SeeLane and provides a quick view of the operation (in green/yellow/red status). The status is determined by automatically checking the Windows' application event logs (where our products log information, warnings and errors). These events include possible failure of hardware units, application problems and decrease of IDENTIFICATION results under acceptable levels.

SeeMonitor also provides various performance graphs for each remote unit, and a multiple view of the units. These graphs assist in the fine-tuning of the system. In the following example the graph of the horizontal center of the ID marking is shown as a histogram, which can be used to verify the correct settings. The graphs are available on-line and generated automatically, thus simplifying the analysis of the operation of the system.

SeeService is an additional utility that "keeps an eye" on the IDENTIFICATION units (SeeLane or SeeGate application). In case it stops to respond (rare cases...) it resets the application and restarts. The utility also checks for updates in the Server, and if there is a new file revision - it automatically updates the application.

To simplify the installation, a calibration tool (**SeeCal**) is available as a very useful tool. The tool shows the camera video, displays brightness/contrast graphs, and enables manual control over the I/O TRUCKd controlled illumination.

IR being used at night to highlight the PLATE

12.2 Sample sequence of operation

The timing of the system (per lane) is described below: ENTRY

#	The VEHICLE	The system	Time
1	Vehicle enters ENTRY LANE and approaches the sensor.		
	In idle, waiting for the sensor activation		
2	Passes over loop and Activates the sensor Nortec loop detector (see documentation)	Switches to capture mode.	0
3		Captures one or more images into memory	~50 msec per image capture

4		Changes the illumination; Captures one or more images into memory; Repeats the illumination change	~50 msec per image capture
5		Calls DLL on one or more images	
6		Identifies the TRUCK	+ ~80 msec per image identification
7		Logs, displays, transmits the Identification to the POF system which will write it on the ticket, via RS232. Checks the database for vehicles in the BLACK list, which will cause an alarm.	
8	Stops when fully at TRUCKd reader	Person swipes and IF EXISTING TRUCKD confirms face via verification. If not enrolled, will enrol, taking full frontal facial images and another image of the VEHICLE COLOUR	~40 msec for a single image capture
9	Drives on	Access TRUCKd / issued ticket now links facial images, TRUCK colour, license plate and date and time and lane.	
10		Goes to Idle	About 0.5 second from the TRUCK entry (a typical setting)
11	Next Vehicle triggers the sensor		

The timing of the system (per lane) is described below: EXIT

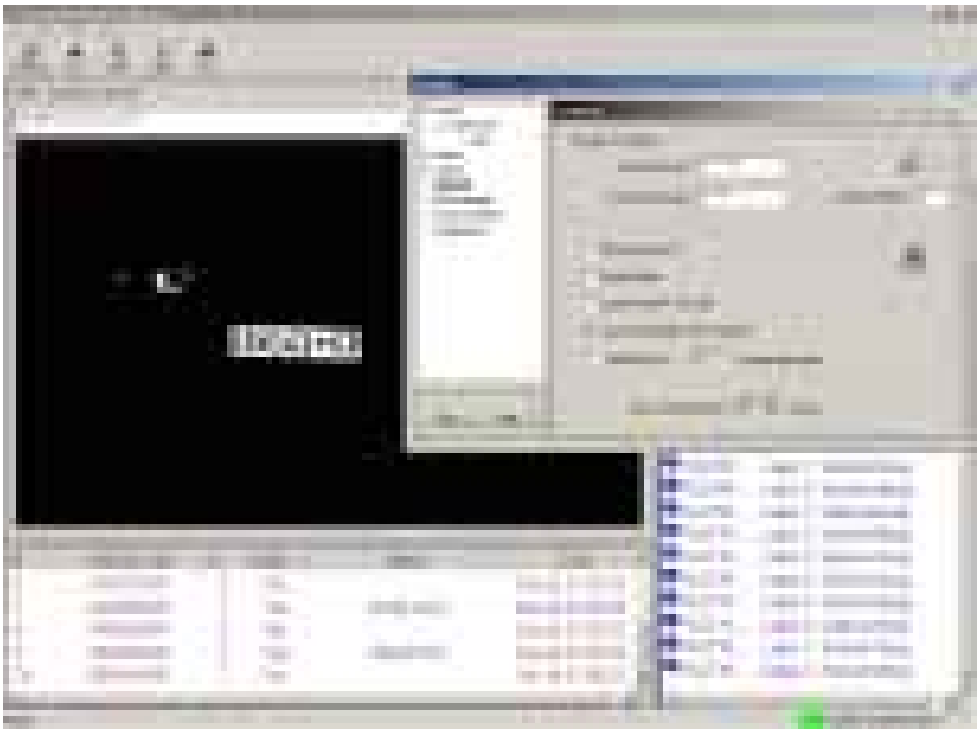
#	The VEHICLE	The system	Time
1	Vehicle enters EXIT LANE and approaches the sensor.		
	In idle, waiting for the sensor activation		
2	Passes over loop and Activates the sensor Nortec loop detector (see documentation)	Switches to capture mode.	0
3		Captures one or more images into memory	~50 msec per image capture
4		Changes the illumination; Captures one or more images into memory; Repeats the illumination change	~50 msec per image capture
5		Calls DLL on one or more images	
6		Identifies the TRUCK	+ ~80 msec per image identification
7		Logs, displays, transmits the Identification to the POF system which will confirm this via the ticket, via RS232. Checks the LOCAL database for vehicles in the BLACK list, which will cause an alarm and NOT allow boom to open.	
8	Stops when fully at TRUCKd reader	Takes a full frontal facial image for facial verification and another image of the VEHICLE	~40 msec for a single image capture
9	If the transaction is allowed system proceeds to open boom.	If face or license plate or TRUCKd or TRUCK colour does not match the information on the ticket, control room is alerted and presented with facial image and general TRUCK overview for comparison. Operator makes decision which is recorded.	

10		Goes to Idle	About 0.5 second from the TRUCK entry (a typical setting)
11	Next TRUCK triggers the sensor		

12.3 Suggested LPR Procedure:

ENROLMENT:

EXISTING EMPLOYEES:
The existing Truck owners would have their license plates entered into the existing database and linked to their name, facial verification and TRUCK details. The member's database would be locked, allowing only authorised users to add new members.



When the TRUCK holder vehicle is seen the system will expect the Trucks and facial verification associated with them, also logging them, with details of time of entry and name associated the license plate. The optional SEE SPEAKER system allows the guards to immediately learn who is who and address each regular parking person by name.

CASUAL DRIVERS

When CASUAL DRIVERS were expected, their details could be entered prior to arrival so that when they arrived they can be linked to an access Truck. If they were not on the system, the driver would drive up to the entrance, a picture of the plate would be captured, OCR would occur, after which the driver would do facial verification, linking the printed ticket to the license plate.

The natural process of e-mailing, calling or filling a simple completed DRIVER application document directly to the system means that when a casual DRIVER arrived at the counter their license number is automatically entered into the custom DRIVER system, and their authorised record would appear. Access to the correct areas with the correct expiry is automatically issued.

ENTRY USE

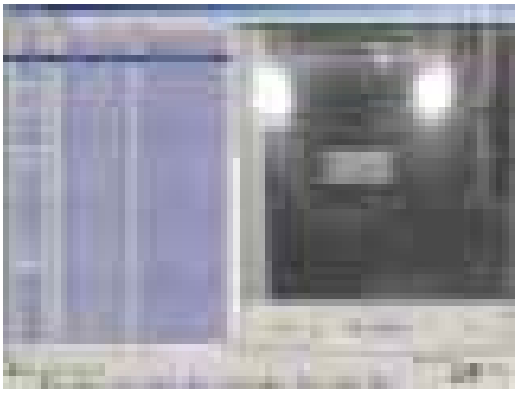
EMPLOYEES:
The existing long-term employees would drive up to the gate (any of X). The LPR system would capture the plate and if the plate were in the database the LPR system would link the plate to a Truck, if this matched, this would then open the gate. The DVR system would then link the vehicle license plate to the drivers face and the vehicle. If there was any concern the guard would investigate past events to see the driver and TRUCK matched the plates.

DRIVERS
Pre-registered DRIVERS would be identified by LPR, which would transmit the details to the facial verification reader via DDE, TCP/IP or RS232. The biometric system would link the DRIVERS info to the license plate and if required a parking ticket, and allow the boom to open.

EXIT USE

EMPLOYEES:
The existing long-term employees would drive up to the exit gate. The LPR system would capture the plate and pass this information to the facial verification and DVR system. If the facial verification matches the enrolled template and the parking ticket is correct, the boom will open. The DVR system would then link the vehicle license plate to the driver and TRUCK seen on the cameras.

DRIVERS
All DRIVERS exiting would be identified by LPR, which would transmit the details to facial verification reader via DDE, TCP/IP or RS232. If the license plate, the VEHICLE ticket info and the biometric ticket issued match, the boom would open.
If not, the guard would investigate.



All video images will be digitally recorded. Video images can also be transmitted to the main office if required. Transmission of the camera images to a remote monitoring control room will be possible.

12.4 Schedule Of Equipment Specifications

See attached EXCEL file

13 LPR Equipment Quote

TO PROVIDE FIXED BLACK & WHITE CAMERAS WITH 12 MM FIXED-IRIS LENSES, AND BRACKETS
SeeTRUCKHead (s): Integrated Camera/Illumination unit(s) housed in a weatherproof enclosure.

- Power supply for SeeTRUCKHead units (input: 110-220 VAC)

Figure See/TRUCK/Head

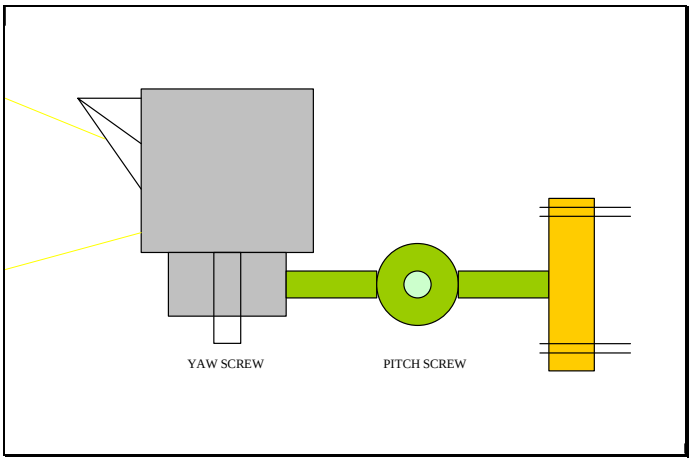


Figure: Pitch & yaw screws

The standard Infra-Red model specifications are:

Camera:

- Sensor: CCD 1/3" B&W CCIR
- Scan: 625 Line interlaced
- Resolution: 380 TV lines
- Shutter: 1/1000
- Power: 9-16 VDC 100mA
- Lens: F1.2-16C / 8,12,16 mm

Illumination:

- Spectrum: a. near Infra-Red (for most Countries)
- Angle: 30
- Intensity: 3 levels pulsed
- Power : 12VDC , 3A pulsed
- Effective Range: 8M (reflective plates) to 4.5M (non-reflective)

Physical:

- Case: Enforced Poly-TRUCKbonate, UV protected
- Standard: IP 65 , weatherproof
- Temperature: -10 c to +50 c
- Degrees of freedom: 2 (left/right, up/down)
- Attachment: 2 x 8 mm screw
- Dimensions: Front: 150x150mm, Depth:135mm+35mm hood, Arm: 160mm
- Drawings: can be downloaded from support page

Electrical:

- Power: Power Supply: 3A 15VDC
- Inputs: 2 lines TTL (3 levels of intensity + off)
- Output: Composite Video 1Vp-p / 75

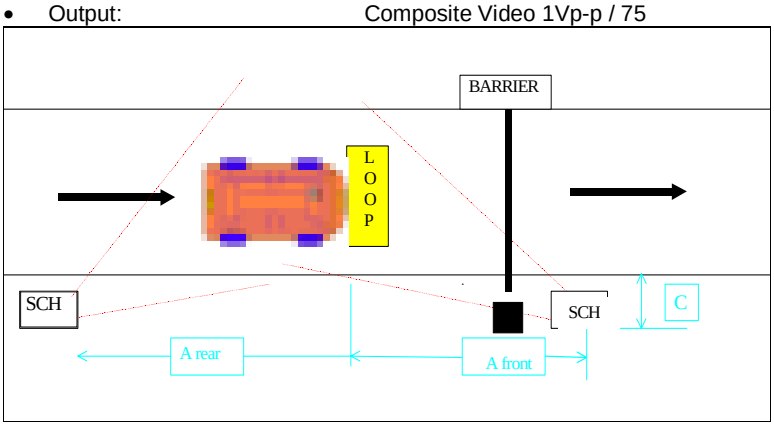


Figure Front & Rear installation (dual cameras per lane, shared activation)

- Input/Output control TRUCKd (including flat cable and terminal block with cover)

TO INSTALL ONE (1) PC,19" SVGA MONITOR.

- AN UNINTERRUPTED POWER SUPPLY FOR THE SERVER.
- ***OPTIONAL EXTRA - ELECTRONIC DISPLAY-***

Model
1 x MS 24/6-2L (1000 mcd) • This unit consists of 2 lines, • With 24 characters per line • Colour : RED LED's • IP Enclosure

The WEIGH BRIDGE welcomes

INTEGRATION OF ALL ITEMS DETAILED.

14 Software Quote

The software is compatible with Microsoft® Windows® 2000 Professional and Microsoft® Windows® XP Professional. The minimum system configuration requires a video capture card, in addition to the standard PC hardware. Minimum hardware requirements are listed below.

Microsoft® Windows® 2000 Professional (Service Pack 4) or Microsoft® Windows® XP Professional

- 1 GHz Pentium 4 Processor
- 128 MB RAM
- 10 GB HDD
- CD-ROM Drive
- WDM – compatible video capture device

The software will allow the following information to be added to the database, both locally and remotely:

Information	NPRS Use
VEHICLE DRIVER(s) Name	Yes
Date of Visit	Yes
Vehicle Registration Number	Yes
Ticket & Biometric Facial CAPTURE	OPTIONAL
Vehicle Colour	The DVR system will capture vehicle colour.
Driver Face	The DVR system will capture the drivers face.

SeeLane software application package, including integrated SeeCarDLL IDENTIFICATION engine

SeeLane Product user's license

RAW FIRE & SECURITY System Scope of Supply (see product leaflet for description and performance)

SeeLane is a PC-based multi-lane LPR system designed for low speed traffic. The SeeLane system includes both hardware and software, and can accommodate either one camera per lane (standard configuration) or two cameras per lane (stereo vision) for added reliability and security.

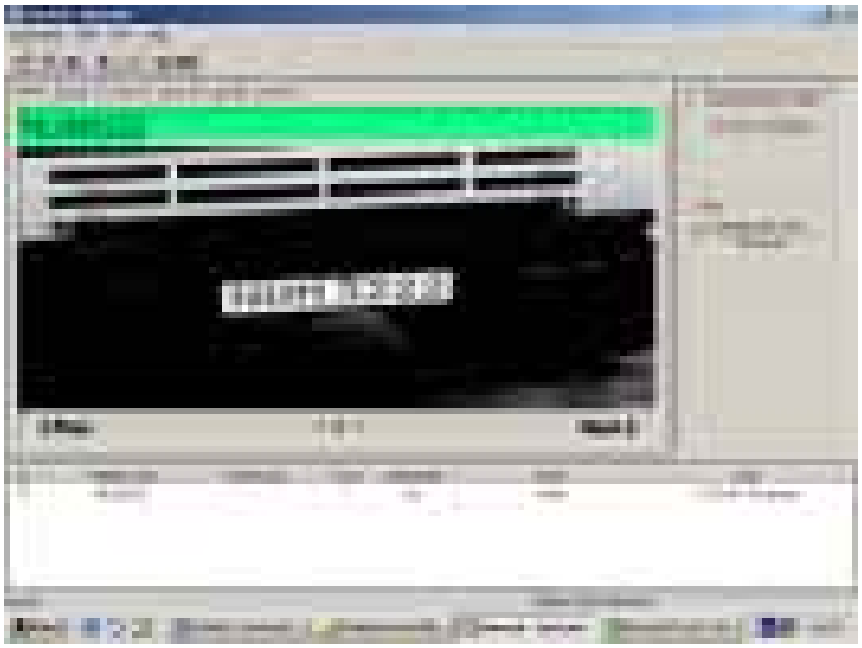
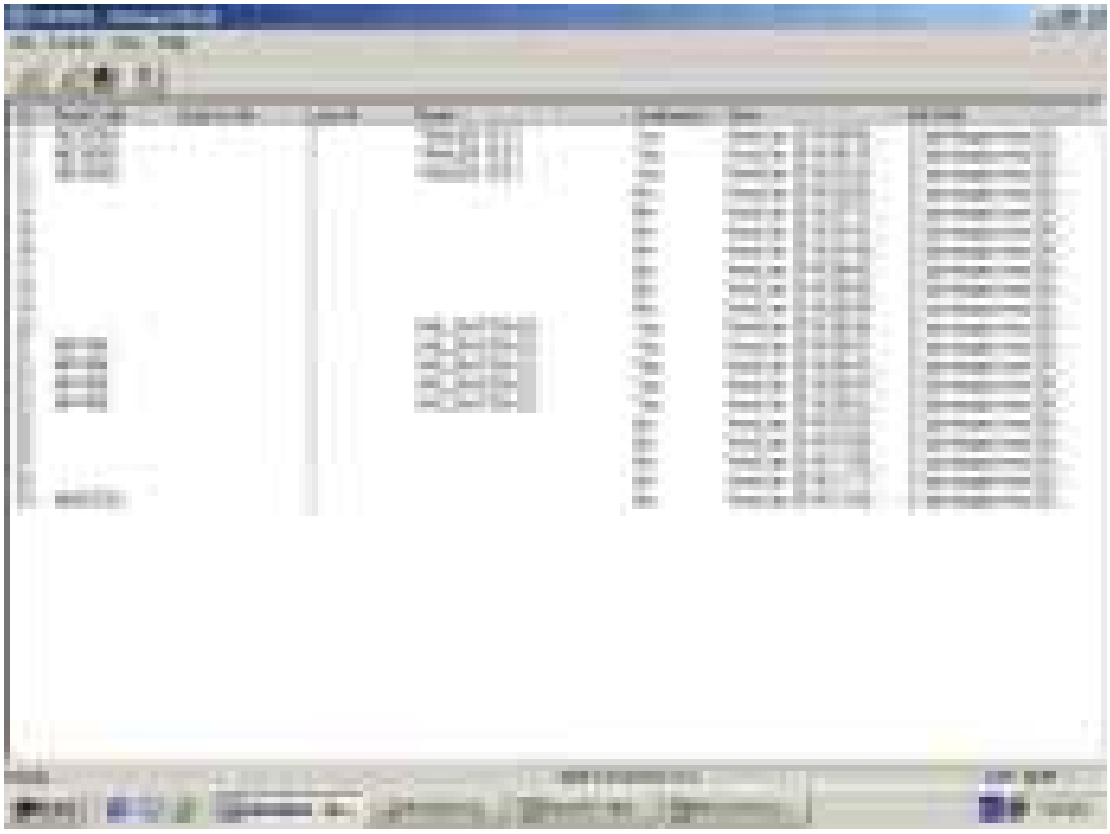


Figure See/Lane configuration



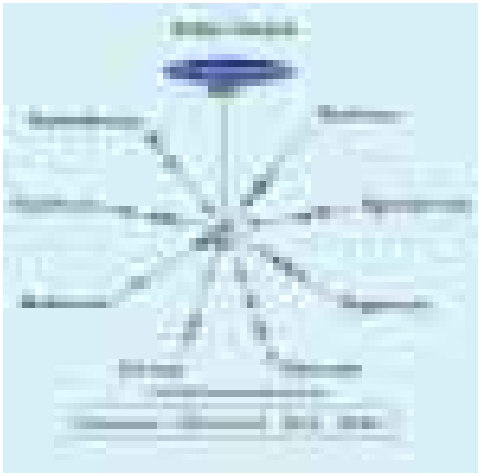
TO INCORPORATE ONE LOGGING SOFTWARE

14.1 FACE IDENTIFICATION SYSTEMS

"Biometric" technology, and specifically face IDENTIFICATION, which can recognize people from a facial image, is becoming cheaper and more powerful as technology improves. Biometrics comes in many forms. The idea is said to date back to ancient Egypt, when records of distinguishing features and bodily measurements were used to make sure that people were who they claimed to be. Modern computer based biometric systems are employed for identification ("who is this person?"), in which a subject's identity is determined by comparing a measured biometric against a database of stored records a one to many comparison.

Technology	Acquisition Device
Fingerprint	Chip or reader embedded in turnstile
Voice IDENTIFICATION	Microphone
Facial IDENTIFICATION	Video camera, surveillance camera, single-image camera
Iris-IDENTIFICATION	Infrared-enabled video camera
Retina-IDENTIFICATION	Wall-mountable unit
Hand geometry	Proprietary wall-mounted unit
Signature-IDENTIFICATION	Signature tablet, motion-sensitive stylus
Keystroke-IDENTIFICATION	Keyboard or keypad

Acquisition devices associated with biometric technology



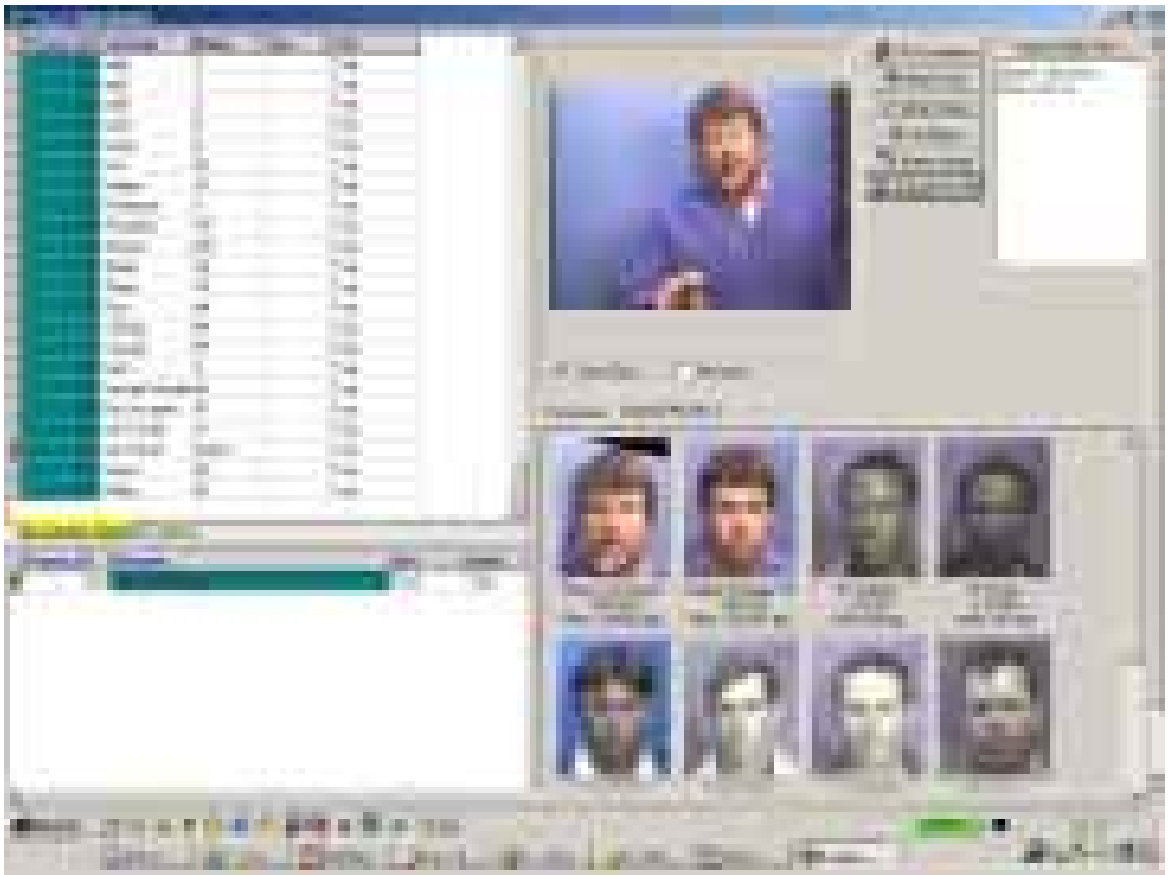
Despite vendor claims, there is no “ideal” biometric technology, although examples of successful uses exist. Facial IDENTIFICATION, a technology that has gained ground in recent years thanks to the falling price of computer power. It works by analysing a video image or photograph and identifying the positions of several dozen fixed "nodal points" on a person's face. These nodal points, mostly between the forehead and the upper lip, are only slightly affected by expression or the presence of facial hair. Facial IDENTIFICATION is becoming more widespread, because it can exploit existing cameras and existing databases of facial images from driving licences and passports. Exclusion techniques based on BIOMETRICS have some serious technological advantages. If a single positive identification can prevent a theft, then the sooner one begins to use the technology the better. Yes, exclusion systems are capable of achieving the success rate necessary for those kinds of decisions. For the most part, biometrics appears to be a technology whose time has come from the marketing viewpoint. It is suggested that the biometrics be used as a TOOL, which is used to CONFIRM identity, so not as the primary identification (Business Week, 2003 “Why Biometrics Is No Magic Bullet” Available online at: http://www.businessweek.com/technology/content/ jul2003/tc20030722_2846_tc125.htm) .

Zephyr Analysis to determine the "ideal" biometric

New real time security alternatives are a reality today with the ACSYS SYSTEMS lighting fast Face IDENTIFICATION System. A leading developer of mission critical biometric solutions, ACSYS SYSTEMS is committed to leadership, responsiveness and unparalleled results. We are driven to empower our clients and partners to go beyond tradition to create new benchmarks for security. Accuracy is everything.

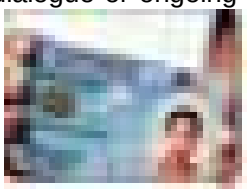
Facial IDENTIFICATION used for identification.

Biometric Intelligence: Biometric security should be seen as an extension of human intelligence, and not as a replacement for it, because automated security will only be as good as the human intelligence that backs it up. The danger of relying too heavily on technology is nowhere more real than in the area of biometric surveillance. Such surveillance is most effective if the people you are trying to locate are not aware of its use. Audit trails left by an individual as he or she uses Casinos, TRUCK rentals, and any other services that require biometric authentication (i.e., possibly any activity that requires the use of a credit TRUCKd, driver's license, passport, or any other major form of identification) could become a significant contribution to intelligence systems.

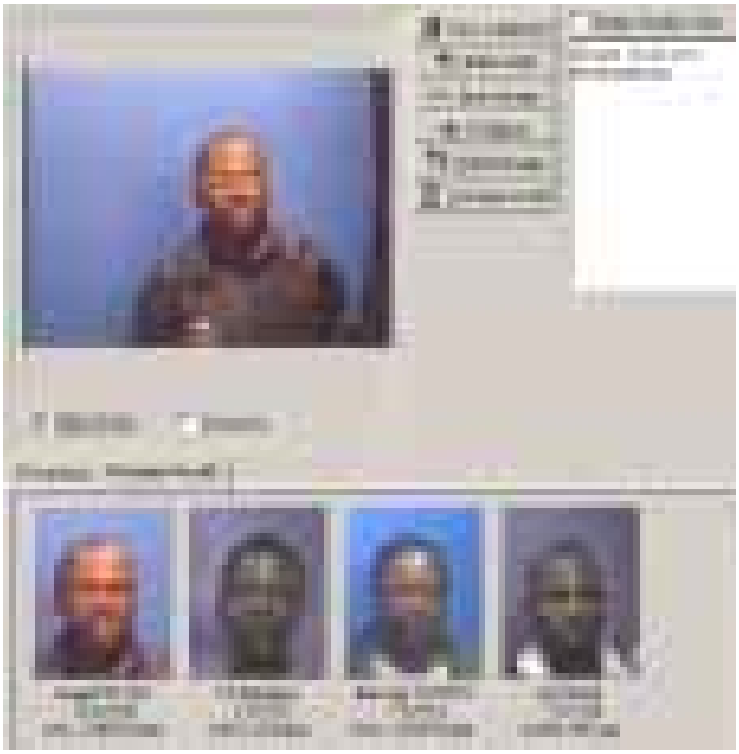


15 Privacy discussion

Discussion concerning the implementation of large-scale biometric systems always includes speculation concerning public attitudes. One of the difficulties with what is said about public attitudes, on any subject, is that interest groups tend to impute their own fears, values and biases to the public. Most of the interest groups, who speak out on the subject of privacy, tend to have attitudes that are not friendly to the use of biometrics. The danger is that the more those views are repeated, the more they will tend to shape public opinion. Although there is much talk in the biometric community about the public attitude, most who raise the point do so on a very superficial basis. There has been little organised dialogue or ongoing discussion concerning the subject of public attitude. It would be worthwhile study on attitudes and biases within the various segments of the biometric community, for and against large-scale biometric systems. Some do not see it within their business interest for there to be rapid progress toward large systems, since they may not feel that their technology or product is yet positioned to be competitive or dominant or are concerned that a niche they occupy or intend to occupy will be squeezed out by systems of more general application. Cf. Betamax vs. VHS; Mac OS vs. DOS vs. Windows, etc. The in depth study of the problems of privacy is beyond this study (see Westin, A, 2001 for more information).



New technology is boosting biometric surveillance (Grossman, 2003) and privacy may vanish forever. It is possible that legal and political issues such as privacy and data access could hinder the application of biometrics (Lee, 2003). Most of the public polls suggest that there is nowhere near the opposition to exclusion techniques that is claimed. Very little effort has been made by the government, the press or the exclusion industry to explain, and to distinguish, exclusion techniques from the controls that ought be placed on informational databases. The result is that public concerns on the collection, use and release of data are being largely ignored. Privacy concerns are very difficult to address, since they change over time, and differs across cultures. By adhering to applicable best practices, even those technologies more capable of being misused - primarily facial IDENTIFICATION and fingerprint - can be deployed in a privacy-sympathetic fashion (BioPrivacy Best Practices 2003 Available online at: http://www.ibgweb.com/ reports/public/reports/ privacy_best_practices.html). The use of the information gathered for exclusion purposes needs to be weighed against the possible use of the information. Fingerprint, face and iris have the highest privacy risk. It is essential that



appropriate protection should be in place to ensure the technology is not misused (Mc Cullagh, D 2003). Self-reporting data would be wrapped in software or digital watermarks that guard against misuse of private information by tracking who has used the data, and where they have been moved (Roush, 2003). The manner is which proper protection occurs is beyond the scope of this study.

Identity theft, using stolen credit TRUCKds, phoney cheques, and other impostor scams to steal, is on the increase (Vijayan, 2003). Until recently, the only way to way to attack the problem has been to add expensive screening and administration procedures. However, steps such as hiring security guards, maintaining accurate databases, reviewing identity documents, and asking personal questions have proven to be costly, stopgap measures that can be defeated by enterprising criminals. Compared to other methods of proving identity, biometrics are the only tools that can enhance personal privacy and still deliver effective solutions in situations that require confirmation of identity.

16 Installation Quote

- Bosal conduit, bnc connectors, cabling, labour, (excluding any trenching, electrical work and poles)
- Commissioning and training

THE MAINTENANCE SERVICE (GOLD)

a. The provision of corrective maintenance, which means the rendering of services for diagnosing the breakdown of the goods and the subsequent actions necessary to restore the goods to their corrective function.

b. The provision of preventative maintenance which means the observation of the goods with the intention of identifying minor breakdown or deterioration of the goods and the subsequent actions to restore them to their correct functional and operational state.

c. Ensuring the continuous and uninterrupted operation of the goods, the repair and maintenance of any faulty goods to the original operational condition and the recalibration and re-commissioning of the affected goods promptly in order to ensure the downtime is kept to an absolute minimum.

d. The maintenance services include the cost of all parts and consumables, unless such parts or consumables are specifically excluded.

Should you wish to consider our Silver or Platinum Maintenance plans please feel free to contact me.

Equipment Requirement

The performance of the PC and camera equipment is subject to a 220-volt power source at each camera position is to be provided. If required we can arrange an electrician at an additional cost.

The CCTV signal from the cameras requires fibre to get back to the control room (if more than 75M from the PC).

17 Digital Recorder Integration

Both the LPR and facial identification incorporate into existing DVR systems, allowing the use of existing infrastructure, turning data into information.

18 Special Terms and Conditions

This offer is subject to our standard conditions of agreement available on request

Exchange Rate: **Rate used:** **US$ 1,00 = R6,00**

The prices quoted below are subject to exchange rate variations and will be based on 80% of the quoted price. Any variation from this rate of exchange on the date payment is received by us, within five (5) clear WEIGH BRIDGEing days (the date selection will be at the discretion of I-CUBE, is for the account of the purchaser. The amount to be adjusted accordingly is 80% of the purchase price. The rates of exchange which will be applied will be those quoted by WEIGH BRIDGEers nominated by I-CUBE

Delivery **: Estimated 1 to 2 weeks from date of receipt of your payment.**

Terms **:** See Below

Validity **:** This offer is valid for 30 days from the above date.

VAT **:** Prices "EXCLUDE" VAT

General Terms and Conditions of Sale from I-CUBE

The Purchaser of products from I-CUBE (Integrated Intelligent Imaging) (herein called "the Company") is bound by the general terms and conditions below. The General Terms and Conditions described herein, together with the Company's price list and/or proposal and/or any incorporated documents shall be read together as constituting the sales contract. IN THE EVENT OF ANY CONFLICT, THESE CONDITIONS OF SALE SHALL GOVERN.

1. LIMITED WARRANTY

1.1 The Company warrants new goods sold hereunder to be free from defects in materials and workmanship, and to be of the kind and quality specified in the proposal, for a period of one year from the date of supply.

1.2 The Company makes no warranty whatsoever as to:

1.3 Any goods sold hereunder which have been repaired or altered by anyone other than the Company.

Goods manufactured by others, which may be incorporated with equipment installed or sold hereunder; however, the manufacturer's warranty for such goods shall be assigned to the purchaser, if possible.

1.4 Purchaser and the Company agree that purchaser's sole remedy against the Company and/or its suppliers for any defects in the goods sold hereunder, whether purchaser's claim arises under the warranty set forth above, or otherwise, shall be limited to the repair or replacement, at the Company's option (during normal working hours) of any parts, FOB the Company's source of the parts. The Company shall have no obligation to pay for installation, or removal of said parts.

1.5 If goods manufactured or sold by the Company are installed, or installation is supervised by the Company or an authorized agent, the warranty period shall commence upon completion of installation, provided installation is not unreasonably delayed by purchaser, in which event the warranty period shall commence when installation could have been completed absent such delays. On all other goods, the warranty period shall commence upon tender of delivery to Purchaser.

2. SOFTWARE LICENSE

2.1 GRANT OF SOFTWARE LICENSE. The Company grants a limited, non-exclusive license to use (not own) one copy of the purchased software per unique computer under the Licensee's custody or control, and subject to the following restrictions and conditions of this Agreement.

2.2 Sole Remedy. The sole remedy of the Licensee for any damages related to use of the software shall be the replacement of the software or a refund of the value of the software, at the Company's option, provided that the Licensee notifies the Company in writing within one year of the purchase date.

2.3 Updates. The Company will provide Software maintenance and/or updates for a period of one year from the purchase date. Thereafter, should the Company elect to provide maintenance or updates, the Company may charge a fee (in an amount determined by the Company) for such products or services, or may waive said fee at its sole election.

2.4 TITLE TO SOFTWARE. All title, copyrights and trademarks in and to the Software including any accompanying printed material, and any copies of the Software, and all enhancements, modifications and updates to the Software, are owned by the Company.

3. DELIVERY and SCHEDULE

3.1 Dates of shipping, delivery, or completion, as may be stated in the Company's proposals, are approximate and assume prompt receipt of all necessary information and reasonable cooperation from purchaser. Delivery schedules are set from the date of receipt of system down payments.

3.2 The company shall not be liable for delay in its performance of the contract, due to force majeure or causes beyond its reasonable control. In the event of any such delay, date of delivery shall be extended for a period of time equal to that lost by reason of the delay.

4. COMPANY DESIGNS and STANDARDS

4.1 Because the Company is constantly improving its products, the designs, dimensions, and weights shown in its proposals, while sufficiently accurate for most purposes are subject to variation. If extreme accuracy is required, additional information and certification will be provided upon request after receipt of order.

4.2 The goods sold hereunder shall be manufactured to the applicable standards, if any, stated in the proposal documents. In the absence of definite descriptive design criteria, the Company's standards shall be applicable.

Basic Terms & Conditions

VALIDITY	:	90 DAYS [Valid until 2005-05-19]
AGREEMENT	:	This quotation is subject to the "Standard Conditions of Agreement" attached to the quotation. If, for any reason, this agreement is not attached to the quotation, a copy will be supplied on request.
SHIPPING METHOD	:	Courier
DELIVERY BASIS	:	Delivered
DELIVERY TIME	:	Approximately 1 to 2 weeks. Not firm.
QUOTATION BASIS	:	Exclusive of VAT, import duties, surcharges, excise duties and any other ad valorem costs as specified in the Customs and Excise Act No 91 of 1964 and Amendments thereto, are excluded. "Ordinary Customs Duty" means any duty specified under Part 1 of Schedule 1. "Import Surcharge" means any duty leviable under Part 4 of Schedule 1. "Ad Valorem Customs Duty" means any duty specified under Part 2, Section B of Schedule 1. However, if these ad valorem costs are quoted, they should be considered only as a guideline of the costs ruling on the date of quotation. If applicable, these amounts will be invoiced and documentary evidence provided.
RATE OF EXCHANGE	:	US$1,00 = R6.00 Any variation from this rate of exchange on the date payment is received by us, within five (5) clear WEIGH BRIDGEing days, the date selection will be at the discretion of Protea Electronics (Pty) Limited, is for the account of the purchaser. The amount to be adjusted accordingly is 80% of the purchase price. The rates of exchange which will be applied will be those quoted by the WEIGH BRIDGEers nominated by I-CUBE.
EXPORT LICENCES	:	Delivery and export from country/countries of origin of items requiring export licenses is subject to these being granted by the governments of the country/countries of origin.
WARRANTY	:	See "Limited Warranty" from I-CUBE above The seller warrants products against defective material and/or poor workmanship.
PAYMENT TERMS	:	Prepayment - See payment terms from I-CUBE above

E. & O. E.

19 INDEMNITY

The person or Company listed above agrees to indemnify, hold harmless and defend I-CUBE and its officers, employees, agents and representatives from and against:

Any liability, loss and expense arising by reason of claims by government, provisional, municipal, local or other authorities (including Suppliers of equipment) or any failure of those listed to comply with any Act of Parliament, law, ordinance, regulation or bye-law made with lawful authority by a government, provincial, municipal, local or other authority, provided that compliance by those listed with the above is required under the provisions of this Document, at law, or otherwise, including without limitation, failure of those listed to pay taxes, duties or fees; and

Any claim, liability, loss or expense arising from actual or asserted infringement or improper appropriation or use by those listed of trade secrets, proprietary information, know-how, copyright rights (both statutory and non-statutory) or patented or unpatented inventions or actual or alleged unauthorised imitation of the WORK of others arising out of the use or sale of materials, equipment, methods, processes, designs, information, or other things including construction facilities furnished those listed or its nominated personal in or for performance of the WORK; and

Any claim, demand, cause of action, loss, expense, or liability on account of injury to or death of persons (including the employees of the I-CUBE) or damage to or loss of property including the property of the OWNER arising directly or indirectly out of the acts or omissions to those listed or its SUB Contractor's or the employees or any thereof, in the performance of the work, including without limitation, such claims, loss of liability arising from the use or operation by those listed of construction equipment, tools, scaffolding, or facilities furnished to those listed by I-CUBE to perform the work, irrespective of whether party to be indemnified was concurrently negligent, whether actively or passively, and including any expenses and attorney's fees incurred by I-CUBE for legal action to enforce those listed indemnification obligations under this clause, but excepting where the injury or death of persons or damage to or loss of property was caused by the sole negligence or wilful misconduct of the party to be indemnified; and

Any claim, demand, cause of action, loss, expense or liability on account of actual or alleged contamination, pollution, or public or private nuisance, arising directly or indirectly out of the acts or omissions to act of those listed or its SUBCONTRACTORS in the performance of the WORK.