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## 1. D-fence – General information:

D-fence, established 1994 is a private company that developed a worldwide unique technology for electronic detection fencing.

The technology was developed by a D-fence shareholder who originally developed the Magal technology.

Based on its technology and products, D-fence also developed its control systems which are the basis for integrating and providing full turn key projects. Such projects include: Airports, Power stations, Oil installations, Government and Industry, Private houses and mansions, Cellular telephony installations, water installations and more. Projects were executed in Israel, Europe, South America Korea, and United States.

D-fence, as part of its project practice, provides full turn-key solutions for installations including, Command and Control systems, CCTV, communications, perimeter detection, access control and more.

In most cases D-fence uses its lead technology which has proven to lead to the apprehension of intruders and perpetrators under the hardest conditions including crashing a vehicle into the fence and their subsequent later return to enter the Premises.

D-fence systems, contrary to most competitors, works with Zero False Alarms under conditions of ground movement, vegetation, rain, train vibrations, strong winds, airplane jets, etc.

Our proprietary technology is implemented within our sensors and field processors providing electronic signals proportional to the force applied on the sensor and the field processor with the proprietary software.

Communications and power supply are designed to avoid system shutdown or malfunction following perpetrator attempts.

The systems are easily used to protect tunnels, water passes and more.

Our customer benefits are high level security while retaining low Total Cost of Ownership.

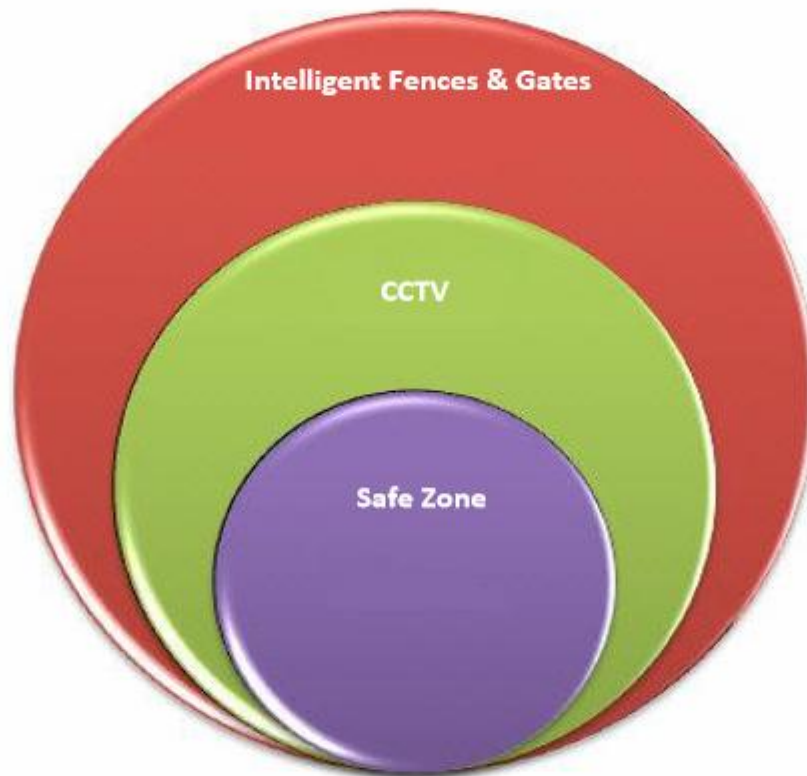
Executed projects include borders, military and government installations, electrical power stations, oil installations, coal mines and respective transportation, airports, industrial facilities, VIP residences and much more.

Projects and clients include:



**2. Site general Risk Assessment** – following the approval of the security concept and elements, D-fence will conduct a survey for exact measures and work plan approval.

**2.1 Security concept:**



**3. Perimeter security Elements are based on 3 assumptions:**

- 3.1 Retaining the natural surroundings
- 3.2 High end security equipment with the ability to detect every intrusion to the surroundings, with no false alarms (weather, vegetation, small animals).
- 3.3 Ability to interact with all other security instruments on site.



#### 4. General:

Following The information received, we are talking about providing integral security to a large number of remotely located communication stations. The security of each installation shall include: Electronic Fences with Intrusion Detection, integration with CCTV cameras, security systems to protect infrastructure equipment at the site (generators, fuel tanks, etc.), and remote command and control.

#### Communication Station – Proposed Integral Security Solution





## 5. Description of D-Fence's Perimeter Security Solutions

### 5.1 D-Taut Wire Perimeter Intrusion Detection System

The taut wire system is D-Fence's highest security solution for protecting sites against intruders. The system provides both a physical barrier against intruders, and a sophisticated electronic remote control system indicating the precise location of any intrusion attempt.

Specially designed stainless steel rugged sensors and unique digital post processing units, insure constant sensitivity that can withstand all environmental conditions with virtually zero false alarms.



**Composition of the D-Taut Wire System**



**WIRE SCREEN**



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D-Fence has years of experience with installing the D-Taut Wire system. The system installed in many sites around the world covering sensitive sites such as Army bases, Airports, Manufacturing sites, Petrochemical sites etc. D-Taut Wire uses advanced technology which allows it to face all weather conditions, and to detect intruders only.

### **Sensor Post**

The D-Taut Wire is based on sensor posts, each of which contains an integral signal-processing unit in addition to the sensors. This electronic unit performs local signal processing, communicates with the central computer at the control station, and controls a local dry multi-purpose contact. The sensor converts mechanical forces into electrical signals. The rugged sensor contains no electrical contacts, moving or rubber parts. As a result of the ruggedness and self-alignment ability of the sensors, installing the posts and connecting the taut wires to the sensors does not require any special training. The post's signal processor has an additional input to which a vibration sensor can be connected. If an intrusion is detected by that sensor, the dry contact is activated and a message is passed via the communication line to the control center.

### **Wire Screen**

Any type of wire such as regular wire, double braided wire, barbed wire, aircraft wire can be used as the taut wire of the system. It is possible to create two parallel taut wire screens without the need for additional posts, by replacing regular sensors (type AS/1) with two-sided (type AS/2) sensors at no additional cost. The protection screen includes the anchor posts, which are equipped with sensors like any other post in the system, and these can also detect intrusion attempts.

### **Low False Alarm Rate**

The specially designed sensors and unique digital post processing units insure constant sensitivity that is not affected by weather conditions. The "D-TAUT WIRE" system operates equally well in all seasons, and the false/nuisance alarm rate is almost zero.

### **Detection Resolution**

The "D-TAUT WIRE" system offers unprecedented detection resolution. Any tampering attempts are pinpointed to specific post and taut wire identification numbers. The "D-TAUT WIRE" system has a detection resolution of a single sensor, unlike the resolution of a group of sensors (one post or even more) in many existing systems. Each intrusion attempt recorded is accompanied an intrusion attempt.





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### Sensors

The sensor has a very wide dynamic range, and exhibit constant sensitivity. This eliminates the need for balancing the sensor during scheduled maintenance operations. When a sensor reaches the end of its dynamic range, the security officer at the control center is notified.

### Maintenance

The system needs no scheduled maintenance operations. Authorized personnel can access the maintenance mode on the central control computer. In this mode, the computer displays each sensor's mechanical status on request. Maintenance personnel can then decide on the sensors requiring maintenance, thus, only the sensors with queries need to be serviced, saving valuable maintenance time.

During field maintenance, the post's dry contact serves as an indicator of alarm detection. This feature enables on-the-spot verification of the correct wiring of all the post's sensors, with no need for control center personnel intervention.

The wide dynamic range of the system's sensors allows for longer intervals between maintenance operations.

### 5.2 DF-2100 Electronic Razor Wire Concertina

A razor wire concertina combined with electronic intrusion detection – Provides both a physical barrier that's very hard to penetrate with pinpoint location of an intrusion attempt that activates an alarm in the control center showing the exact point where the attempt happened. This gives the security forces time to react and reach the place very quickly.



The system is based on a Razor Wire Concertina combined with an energized Galvanized Steel inner coil. This is the only system that combines intrusion detection with an active deterrent to intruders. If an unauthorized person touches the inner coil of the system, a detection alarm is generated. The system generates the alarm when the inner coil is

touched by a person or if it's cut. Even so, the system is not affected by vegetation, animals, extreme weather conditions, RF transmissions or any other environmental factor. The system doesn't generate sparks or static electricity, so there are no risks of explosions.

### 5.3 D-Pressure Strip Perimeter Intrusion Detection System

The D-Pressure Strip is a unique PIDS that integrates with all types of fences and walls (block, metal, wood, plastic, glass, etc.) built form a strip that contains a Strain Gauge Sensor system and its fitted on top of the physical structure of the fence/wall.

The system provides immediate and accurate detection in any event of an intrusion by

### 5.4 D-Bolt Security System

The D-Bolt Electronic Bolt System is a new and innovative security system to protect expensive and/or sensitive equipment against theft. D-Fence's Strain Gauge Sensors are embedded into bolts and screws of different calibers and then connected to an electronic box containing a PC Board card connected to a Wireless transmitter, a GPRS transmitter, an SMS system or a GSM system and to contacts. Any attempt to open or loosen the bolt/screw generates a warning and sends its location.



Any attempt to open or loosen, bend or cut the bolt will generate an alarm and will transmit the exact location of the attempt to the chosen system, and since only 1 bolt is needed for each unit or equipment being protected, the system is highly cost-effective.

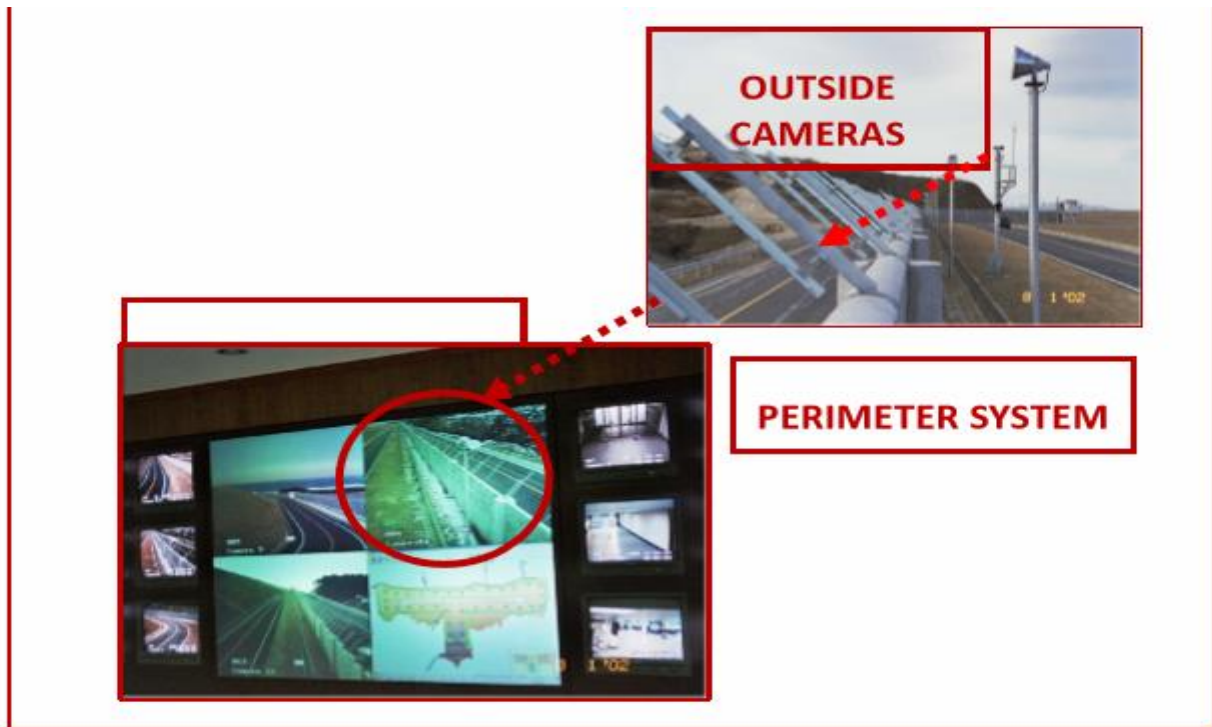
Since the system is based on D-Fence's known and field-tested Strain Gauge Technology, the rate of false alarms is close to zero, and only real attempts to tamper with the bolt will generate the alarm, providing the end-user with reliable protection 24 hours a day.

### 5.5 Computerized Control center (CCC)

D-Fence's CCC gathers, analyzes and reports field data in real-time to all relevant organization entities. Designed to manage both daily routines and crisis situations, the system provides decision makers the data they need to make prompt, informed decisions regarding the situation at hand. In addition, the system conveniently controls the standard perimeter operation.







**Perimeter Monitoring from the Control Center:**



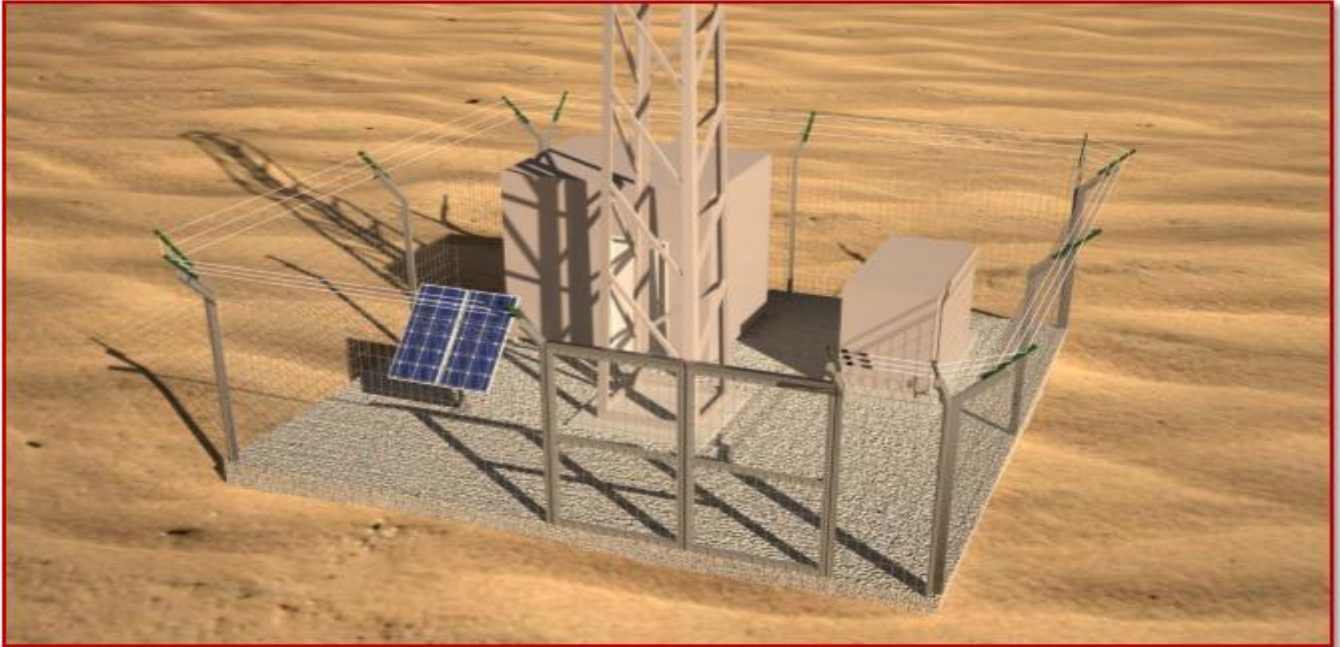
**Proposed Solutions for the communication stations:**

We propose an integral solution for the communication stations that include installing the D-Taut Wire system on top of a regular fence surrounding the stations. As an option, the D-Taut Wire can be combined with a DF-2100 Electronic Concertina to increase deterrence. To protect the access gates to the stations, we propose to install our D-Pressure Strip system on top of the gate frames and in addition, we propose to protect every piece of equipment at each station with 1 D-Bolt screw. All the systems shall be powered by electric supply from the general grid when available, and when not, solar power stations shall be installed. All the proposed systems allow for remote monitoring.

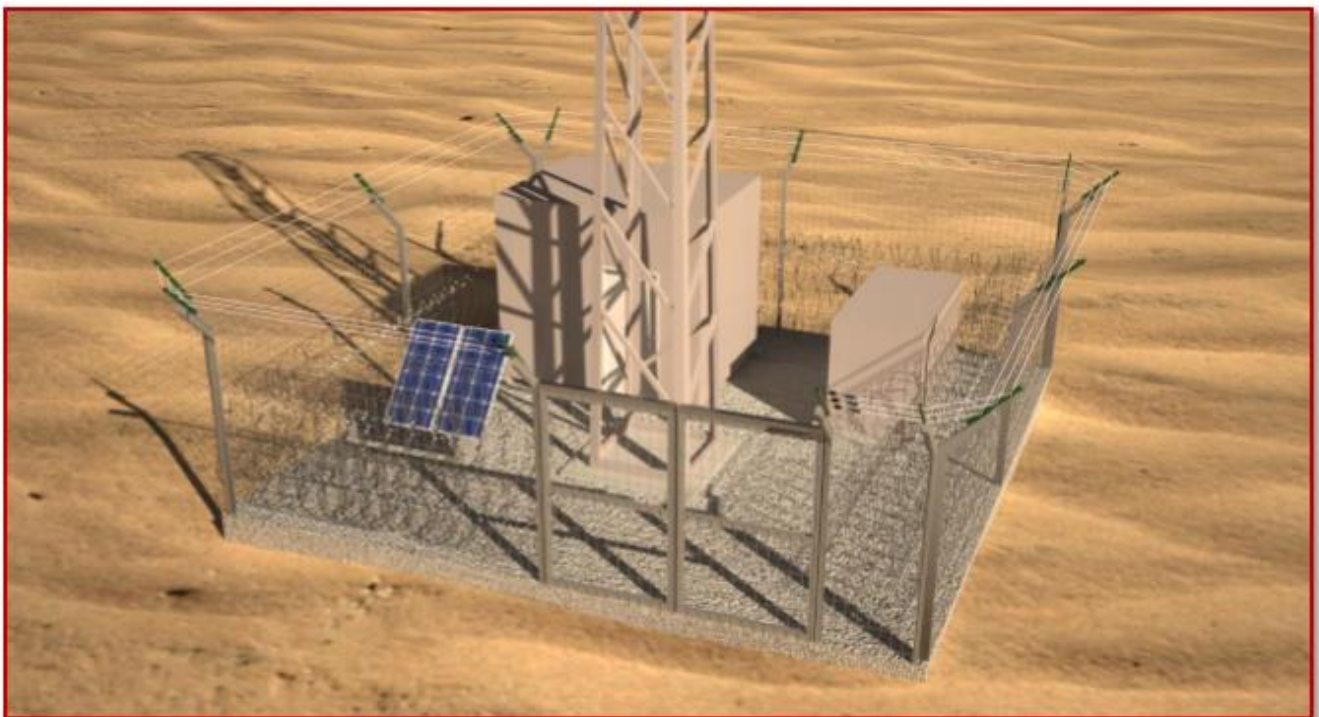
Please refer to the following diagrams for illustration of the proposed solutions:

**Communication Station with D-Taut Wire System on top of the Fence**

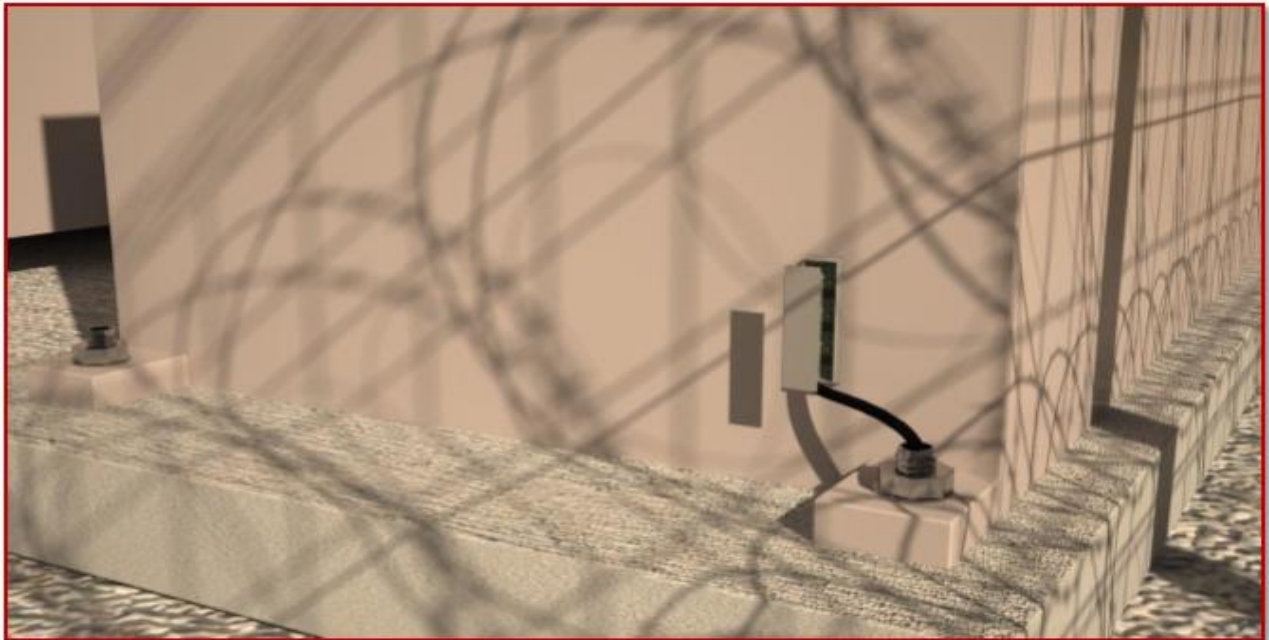




**Communication Station with D-Taut Wire System on top of the Fence + Electronic Concertina**



**D-Pressure Strip System on top of Access Gate**



**Notes:**

- D-Fence's perimeter protection systems will give in alarm in any situation in which there's an attempt to breach the perimeter by climbing or cutting the perimeter fence. This system will also prevent intrusions from the trees and electrical posts that surround the installation.
- The systems and sensors are resistant to corrosion and won't be disturbed or interrupted by RF transmissions in the area and won't create sparks or static electricity.
- **The sensors require almost no maintenance and have life-time warranty.**
- The system can be connected to any other security system at the site like alarms, CCTV cameras, security illumination etc. via dry contacts
- The systems are not affected, and don't generate alarms because of extreme weather conditions, vegetation growing on the fences, small animals or any other environmental factor in the area where they are installed.
- The Control Units have Dry Contacts that allow the PIDS to integrate with any other security system in the installation such as CCTV cameras, Lights, sirens, etc.
- All the systems work under the same protocols so they can communicate between them making them very easy to operate.
- All the information from the different security systems is received at the Control or Monitoring Center.
- It's very important to point out that all the alarms are given **before** an intrusion has occurred. The system prevents intrusions from happening and not only reports about them. The system also gives an alarm in case an intruder tampers with them or tries to neutralize them.

**6. Quotation: The quotation refers to 1 communication station**





**Avogadros & Pythagoras Ltd** RC: 1470561

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DESCRIPTION	QTY	UNIT PRICE (US\$)	TOTAL PRICE (US\$)
Electronic Field Fence Security System Includes: <ul style="list-style-type: none"><li>• Field Fence</li><li>• Sensor Posts</li><li>• Electronic Controllers</li><li>• Communication and Power Cable</li></ul>			
Gate Protection including D-Pressure Strip and Magnet			
Welded Mesh Fence topped with D-Taut Wire Security System			
D-Bolt Security System			
DF-2100 Electronic Concertina (2 rows)			
Energizer			
Protection for Solar Panel			
Funit Transmission System			
SMS System			
Cameras			
Supervision of installation, running of th system, instruction to local operators			

**Notes:**

- The prices are in ExWorks in USA Dollars
- The client must provide a team of 4 to 5 helpers during installation.
- (\*) Prices don't include flights and local expenses of the supervisor (Accommodation, food, internal transportation).



**6.1 The prices include:**

- 1 year warranty
- Delivery Schedule: Delivery to Cargo Forwarder 45 days after receiving order and Down Payment

**6.2 Terms of Payment:**

- 50% - Down payment with the approval of the proposal.
- 30% - Upon delivery to cargo forwarder
- 20% - After installation, running of the system and delivery to the client

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