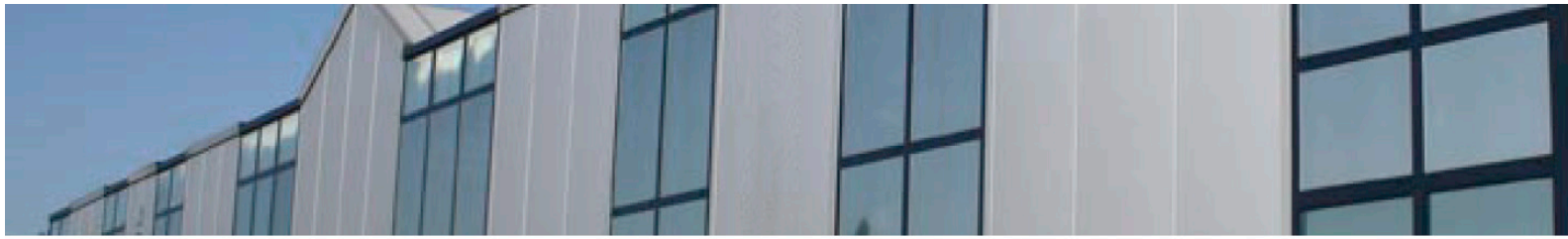

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PROFILON®SD

Protection against Eavesdropping

Full Spectrum Window Protection

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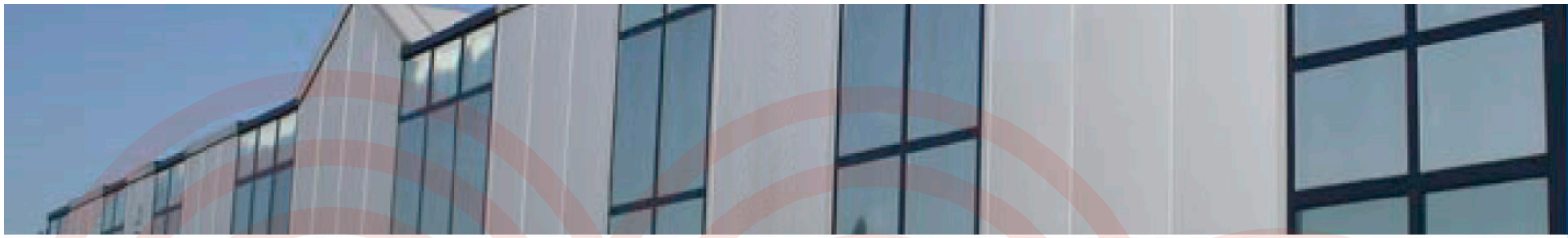

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Problem: All electronics radiate energy called “Signals Leakage” through windows

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…and can easily be intercepted

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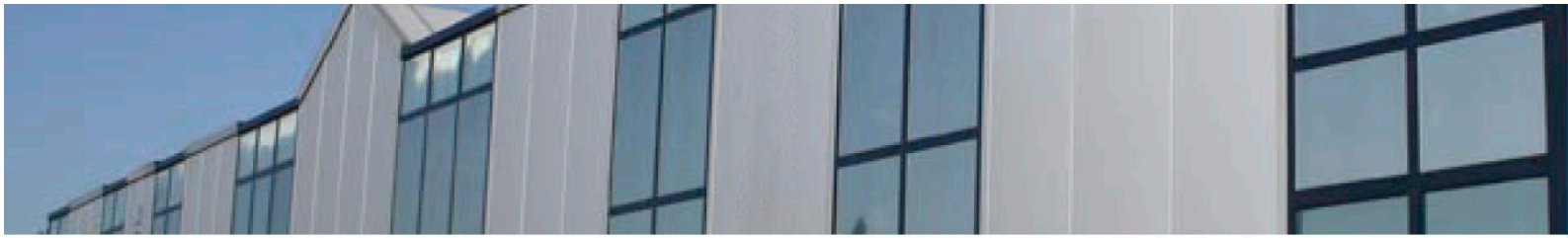

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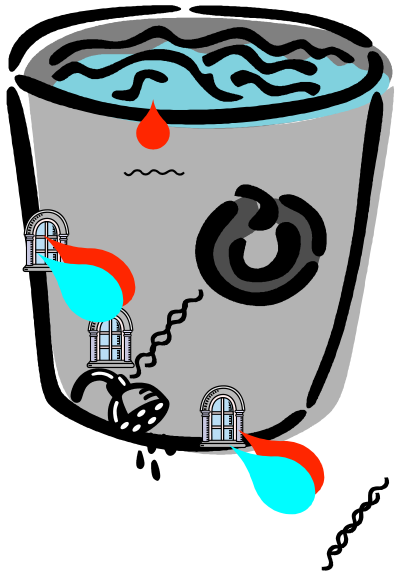
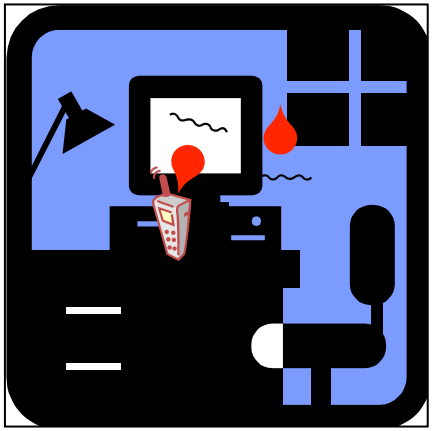
Bucket = Office Threat Analogy





Bucket = Office
Water = RF Energy (encrypted or not)
Facet = External RF Source (Antenna)
Shower Head = Internal RF Source (WLAN)
Holes = Windows
Red Dye = Clear Info

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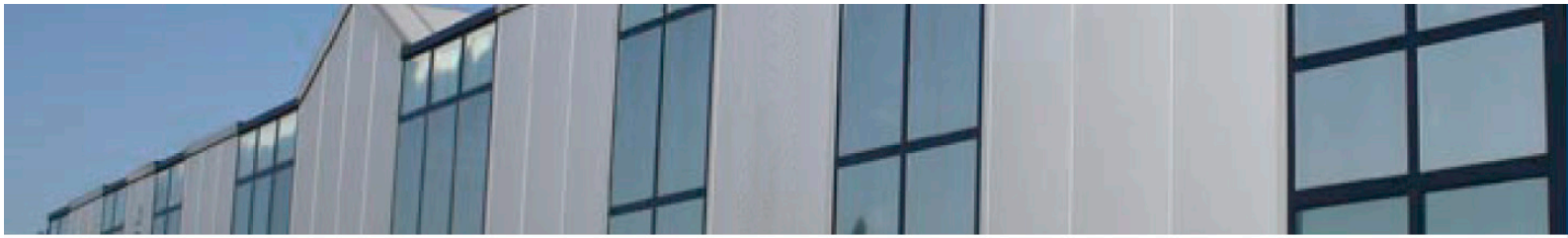

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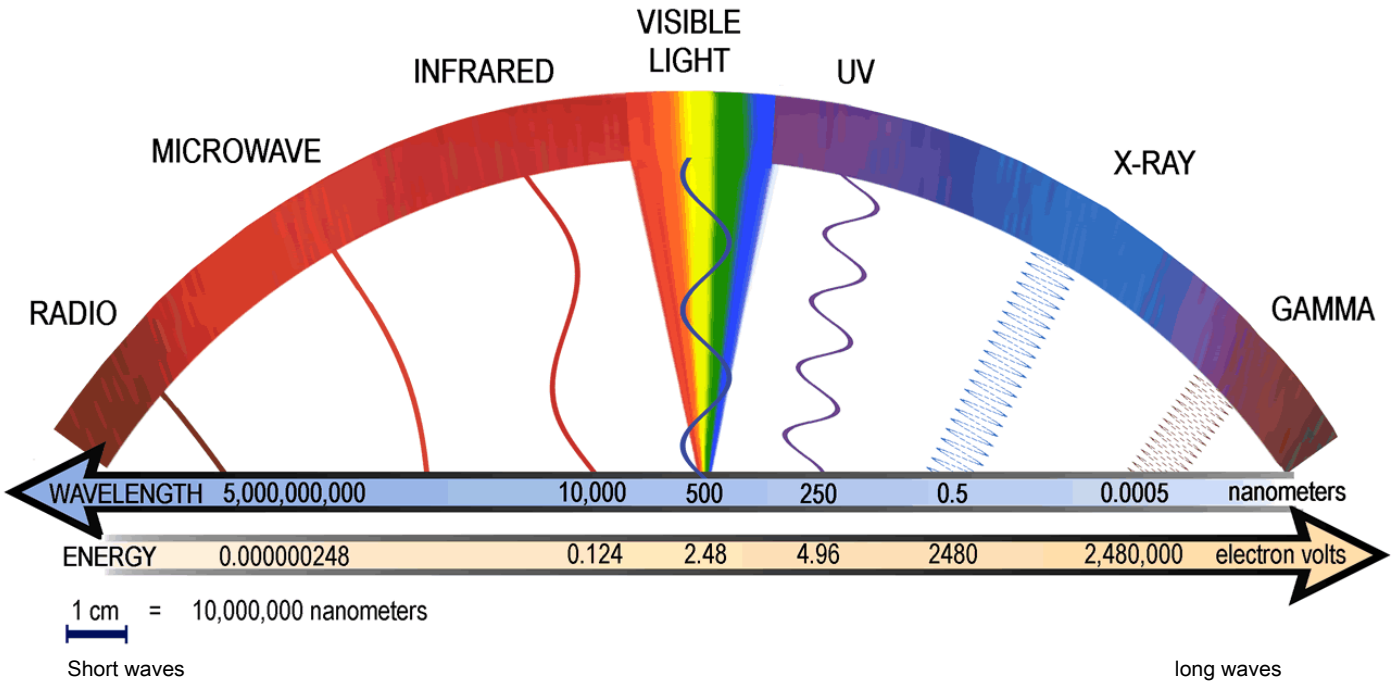
Theory: "Full Spectrum Protection"



- **AM – 500KHz to 1.7 MHz**
- **FM – 88 MHz to 108 MHz**
- **TV – 54 MHz to 88 MHz**
- **TV – 174 MHz to 220 MHz**
- **CB – 26.9 MHz to 27.4 MHz**
- **Garage Doors – 40 MHz**
- **Standard Cordless Phones 40 to 50 MHz**
- **Baby Monitors 49 MHz**
- **Satellites – 1.2 GHZ & 1.5 GHz**
- **Air Traffic Control – 960 MHz to 1.2 GHz**
- **Flight Radio – 133 MHz to 393 MHz**
- **Cell Phones – 824 MHz to 849 MHz**
- **Cell Phones – 850 MHz, 900 MHz, 1.8 GHz, 1.9 GHz**
- **Wireless LAN (802.11x) – 2.4 GHz & 5.6 GHz**
- **Bluetooth – 2.45 GHz**
- **dB or Decibel as RF Energy – 20log Si/So**
- **dB – 3 dB for Power; 6 dB for volts (eV) for RF**
- **dB spl is for Sound Pressure Levels not RF**

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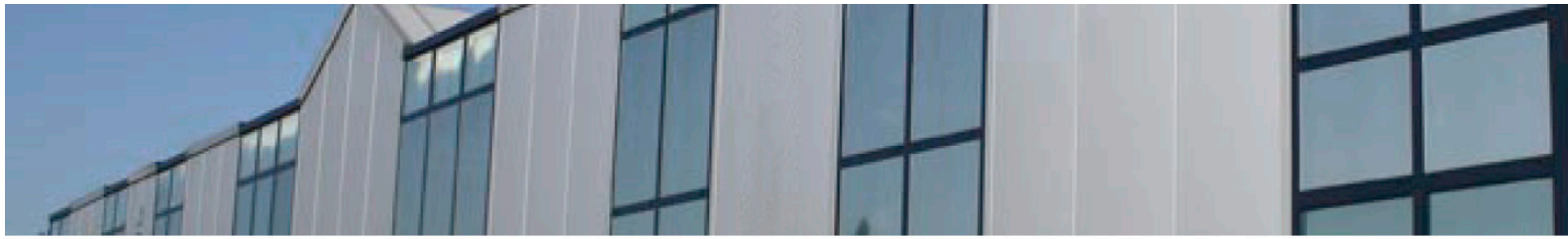

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General threat summary

- IR, RF and optical threats
  - Active, passive, TSCM (Technical Surveillance and Counter Measures), etc.
  - Eavesdropping, TA, Wireless DoS attacks
- Intentional transmissions – 802.11x
  - Proliferation of wireless devices
- Electro magnetic interference (EMI)
  - 3 V/M, 10 V/M quasi standards
  - Exclusionary clause for insurance

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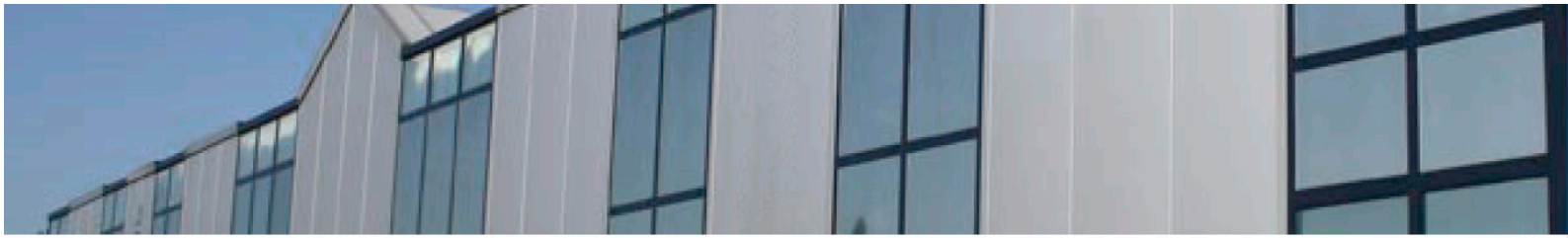

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Demonstration
PDA with broadband wireless access

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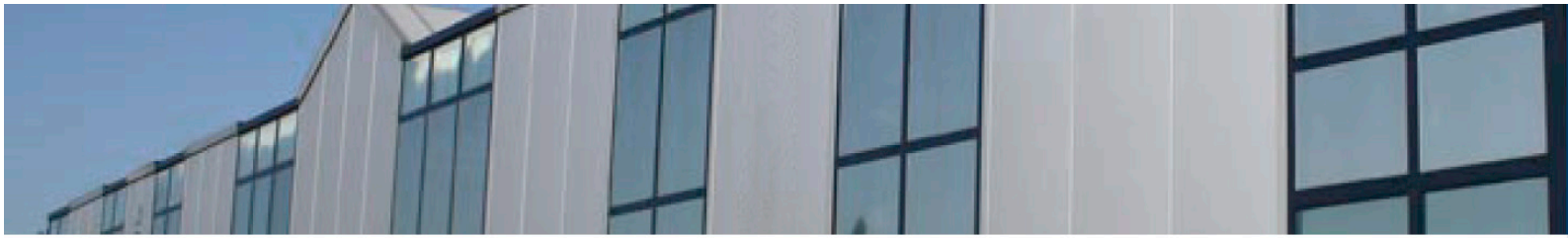

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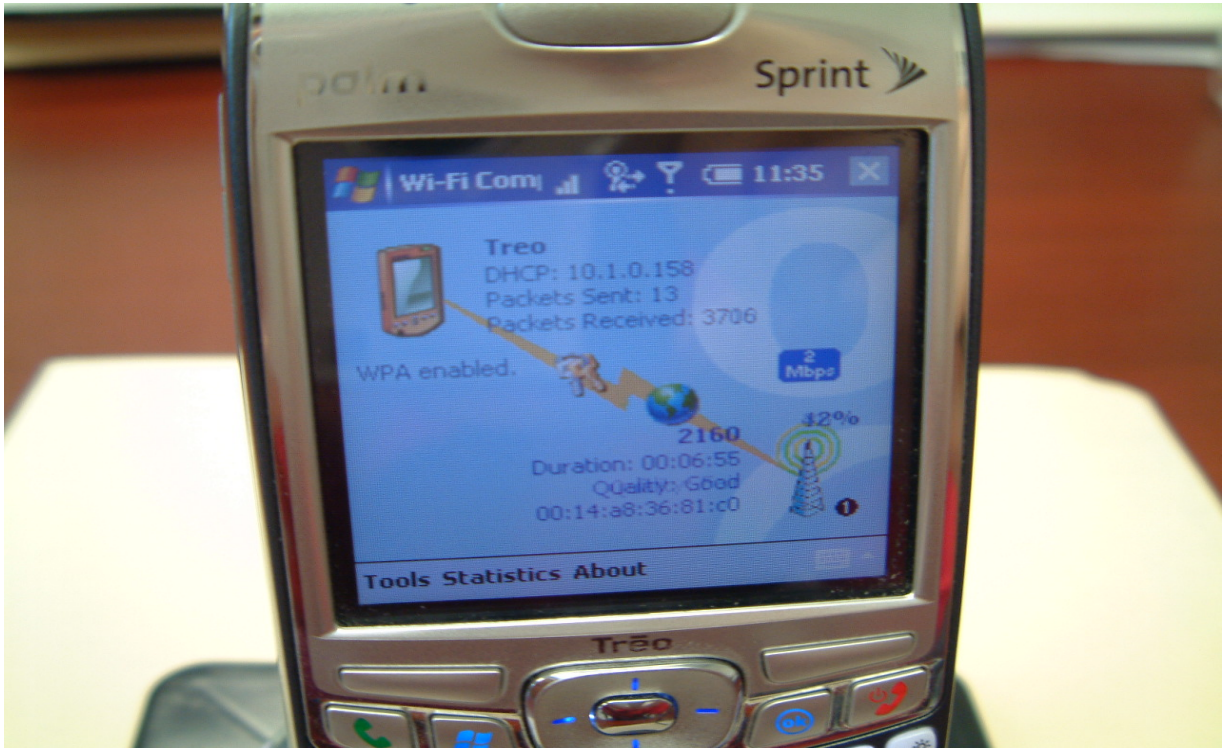
2Mbps wireless band width
“Good” Quality Signal



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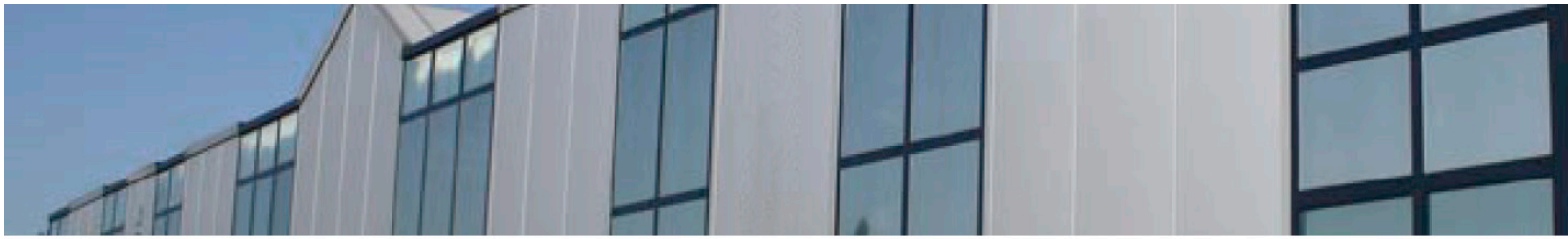

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Now shielded with Profilon®SD200 security film

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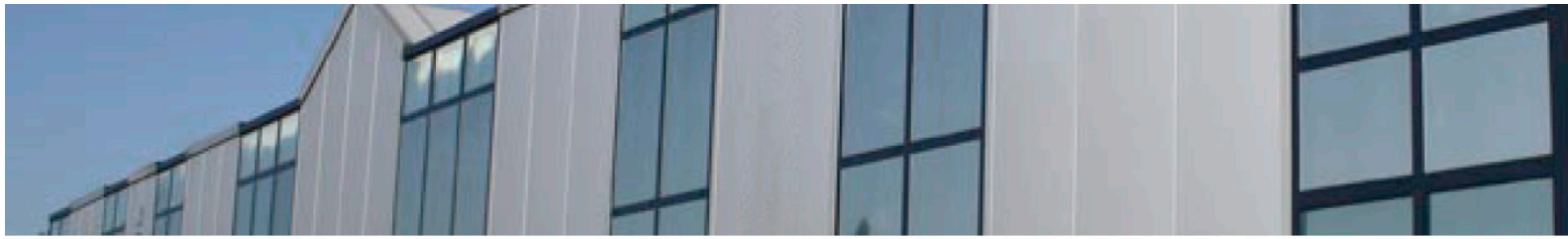

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Profilon®SD security film impact: Can’t see the network! Loss of signal - connection

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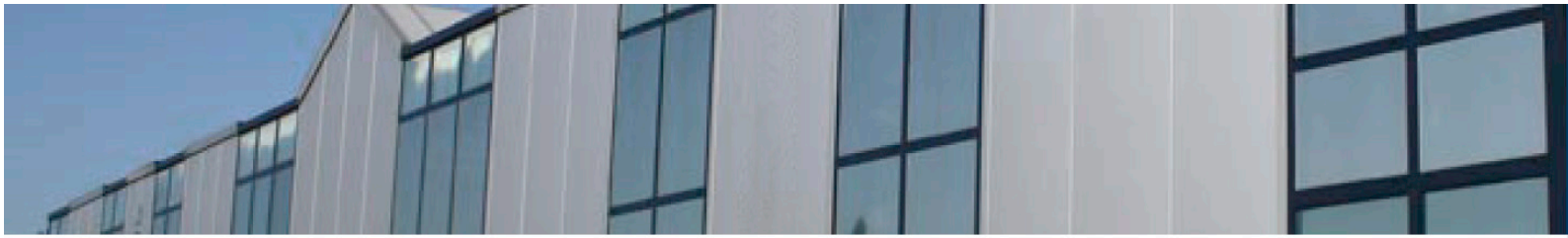

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GAO wireless report

- Protection for Electronic Assets and Buildings

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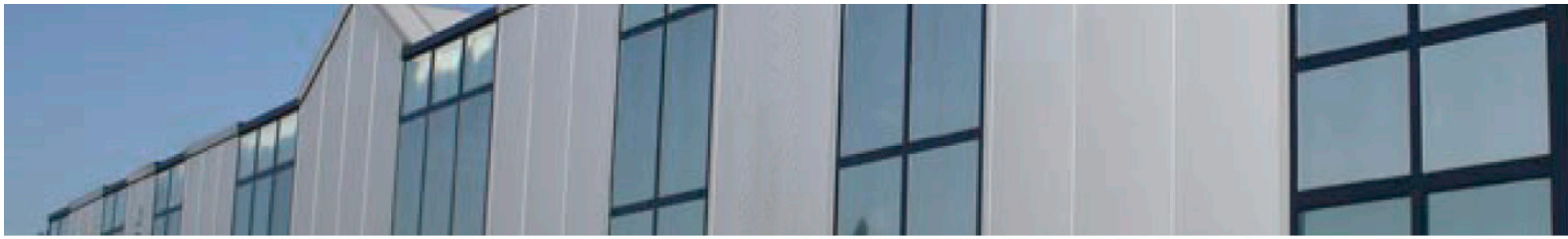

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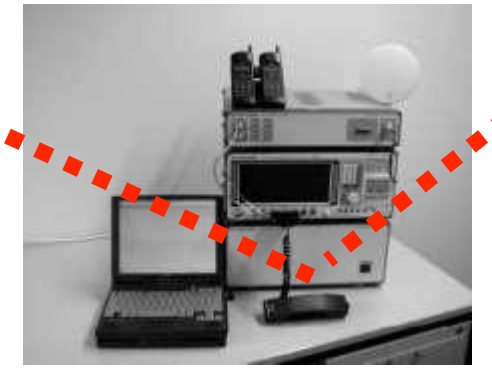
Examples:

Interception or mobile phones, blackberries etc.

Handy
Blackberry

PROFILON SD stopps the signal connection between the antenna and the phone so the signals cannot be catched by an IMSI catcher



Basisstation

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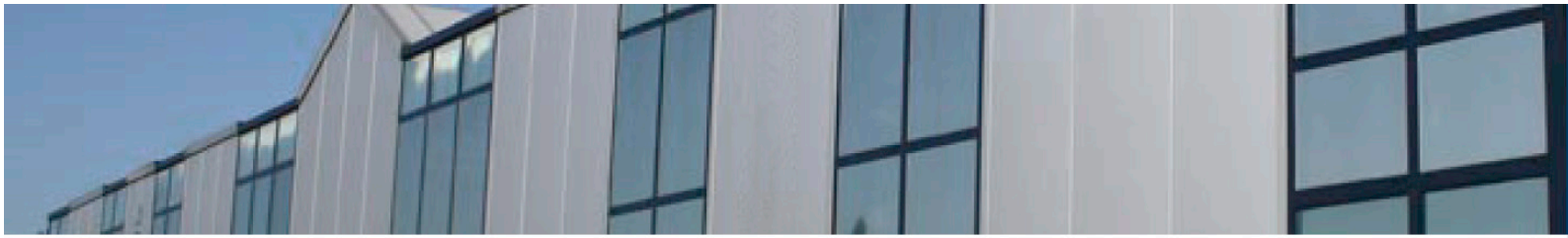

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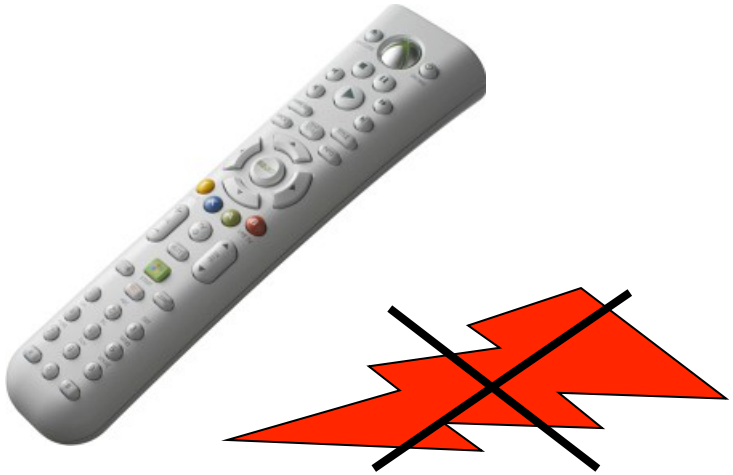
Example:
Eavesdropping of translator cabins by IR

PROFILON SD blocks the emanation od the IR rays and seriously interferes the eavsdropping of translator cabins



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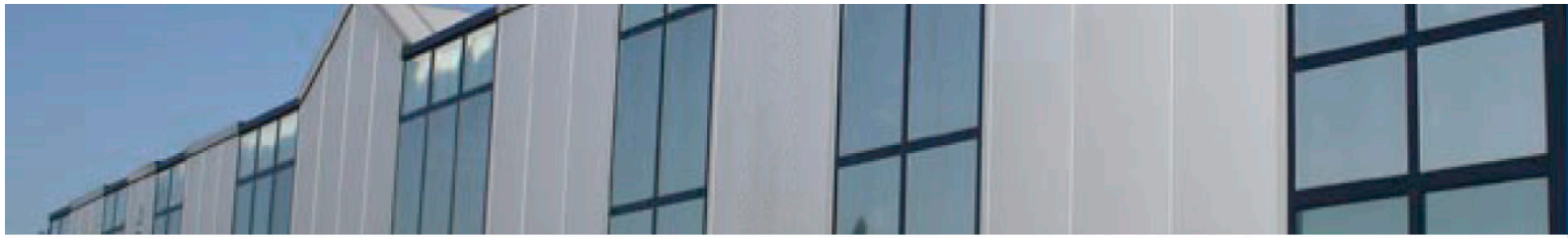

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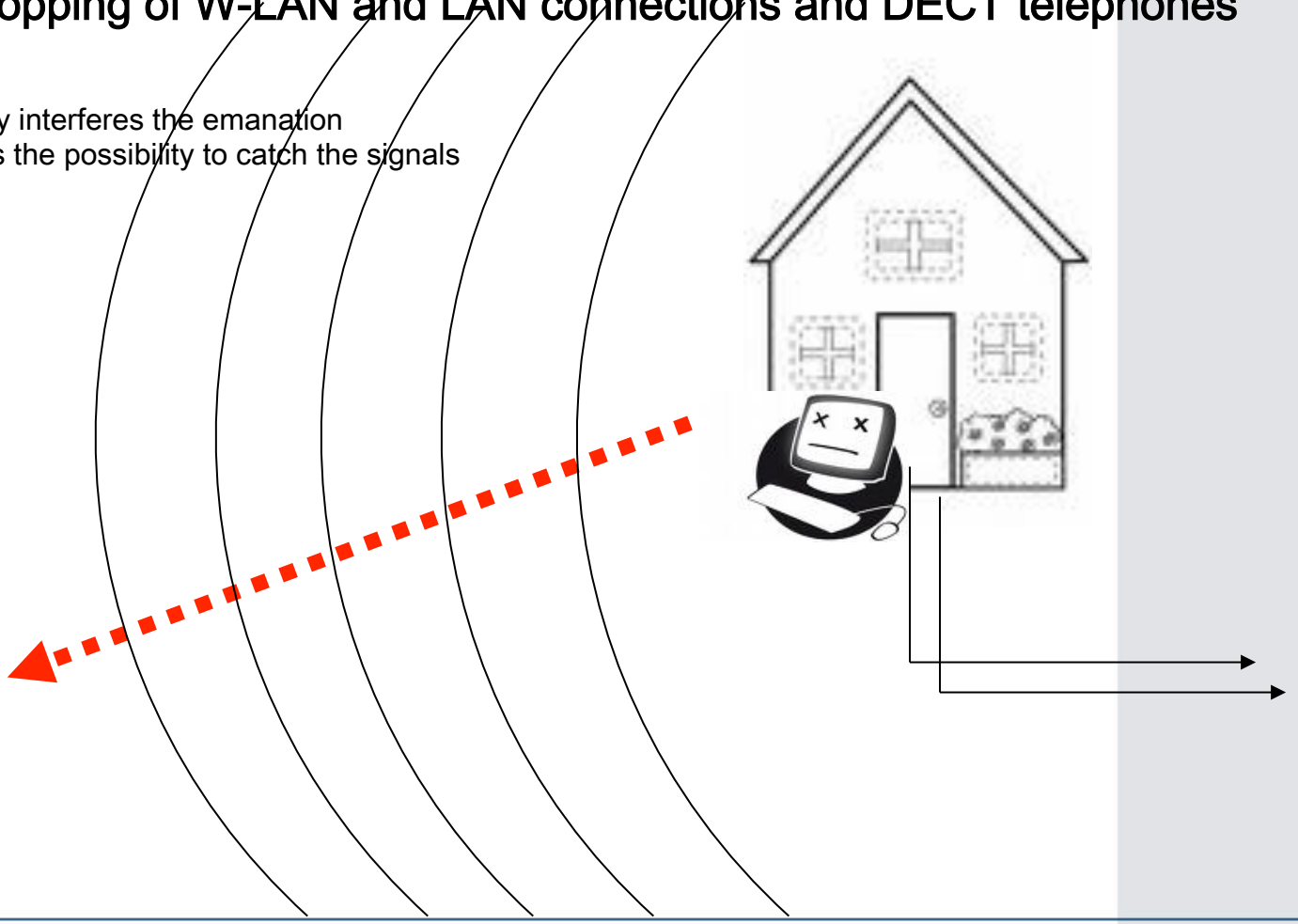
Example

Eavesdropping of W-LAN and LAN connections and DECT telephones

PROFILON SD seriously interferes the emanation
of RF rays and mitigates the possibility to catch the signals
for eavesdropping.



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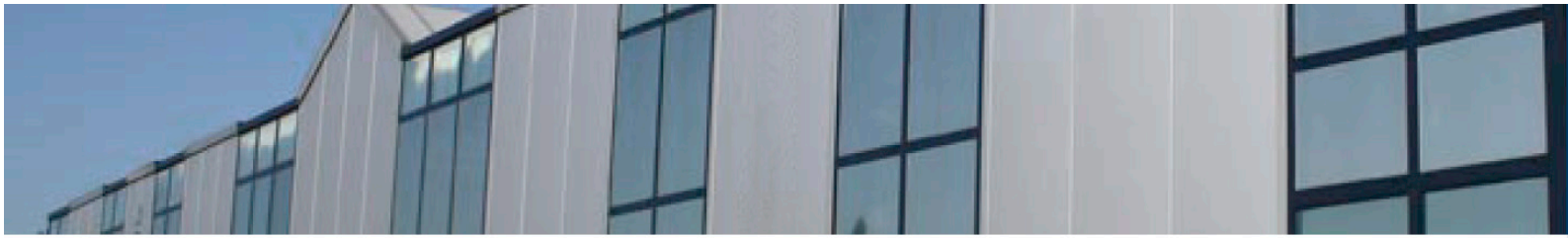

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Example:
Energy saving

PROFILON SD blocks UV rays and reduces the heat coming through the glass of the windows

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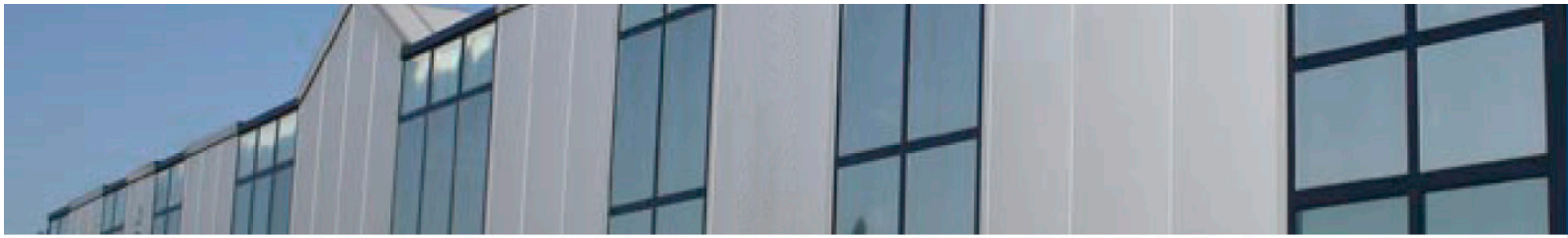

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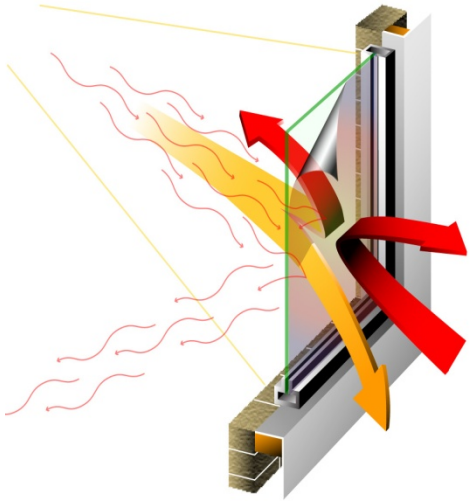
How does it work

Building Exterior ⟵ ⟶ Building Interior

Reject RF/IR/UV Signals:

Blocks:
RF
IR
UV
Microwave



Reject RF/IR Signals:

Profilon®SD100
Window Coating

Blocks:
RF
IR
UV
Microwave

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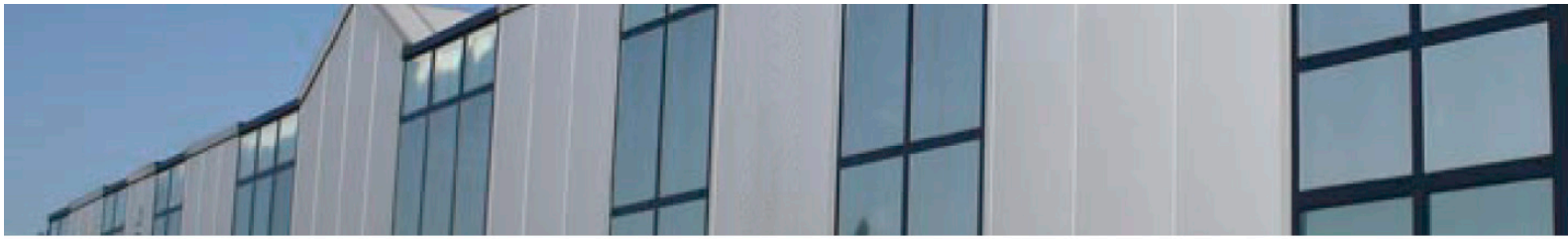

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Key benefits of Profilon® SD technology

- RF and IR eavesdropping countermeasure
- Total solar energy rejection
    - Green and key for power/space/cooling (PSC)
- Electromagnetic interference (EMI) protection
- Blast hazard mitigation
- UV protection
- Wireless LAN security (802.11x)
- Other benefits: IED security, RF doming, FCC, Human/Health Hazard protection

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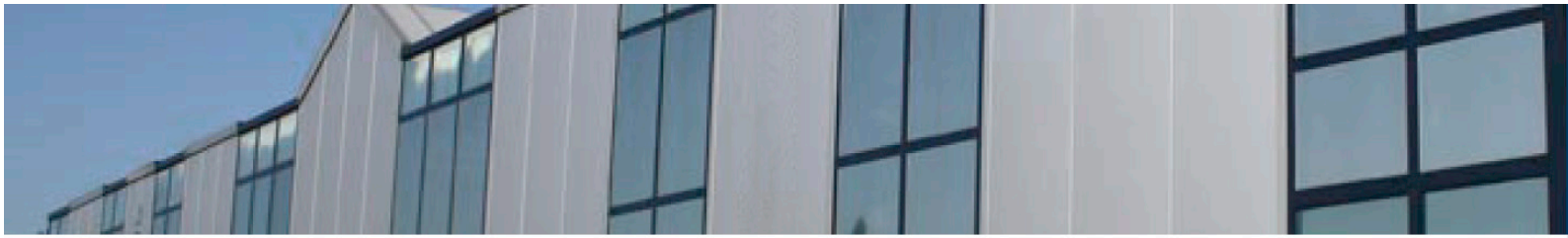

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Full protection with ONE film installation

PROFILON® SD: RF/IR Security combined with bomb blast and burglary resistant Security Film

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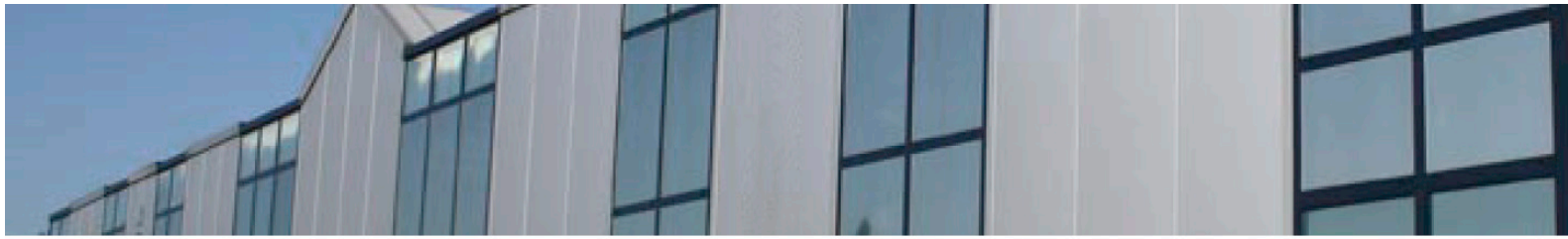

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RF/IR/UV & Blast Hazard Protection

Product	VLT 400-780	RF 30MHz-6 GHz	IR ➢940nm	Film Transparency	TSER	Blast Hazard Mitigation
Profilon®SD250	Approx. 53%	46 dB Average	<1%	Very Slight Blue-Green	>70%	Yes
Key Benefits	High Light Trans.	RF Barrier On Windows	Defeats Laser Mic. Threats through scanning thr reflection of a surface opposite the window	Very Clear and Attractive	High Energy Efficient Film – Cost Savings	Spall Shield Avail.

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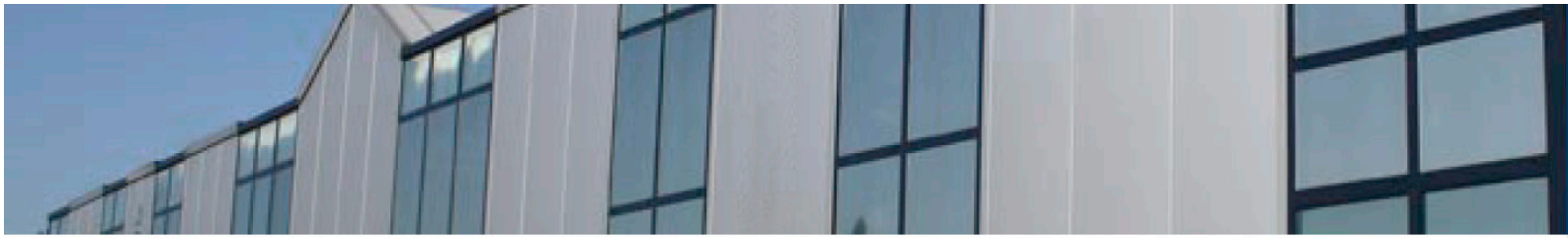

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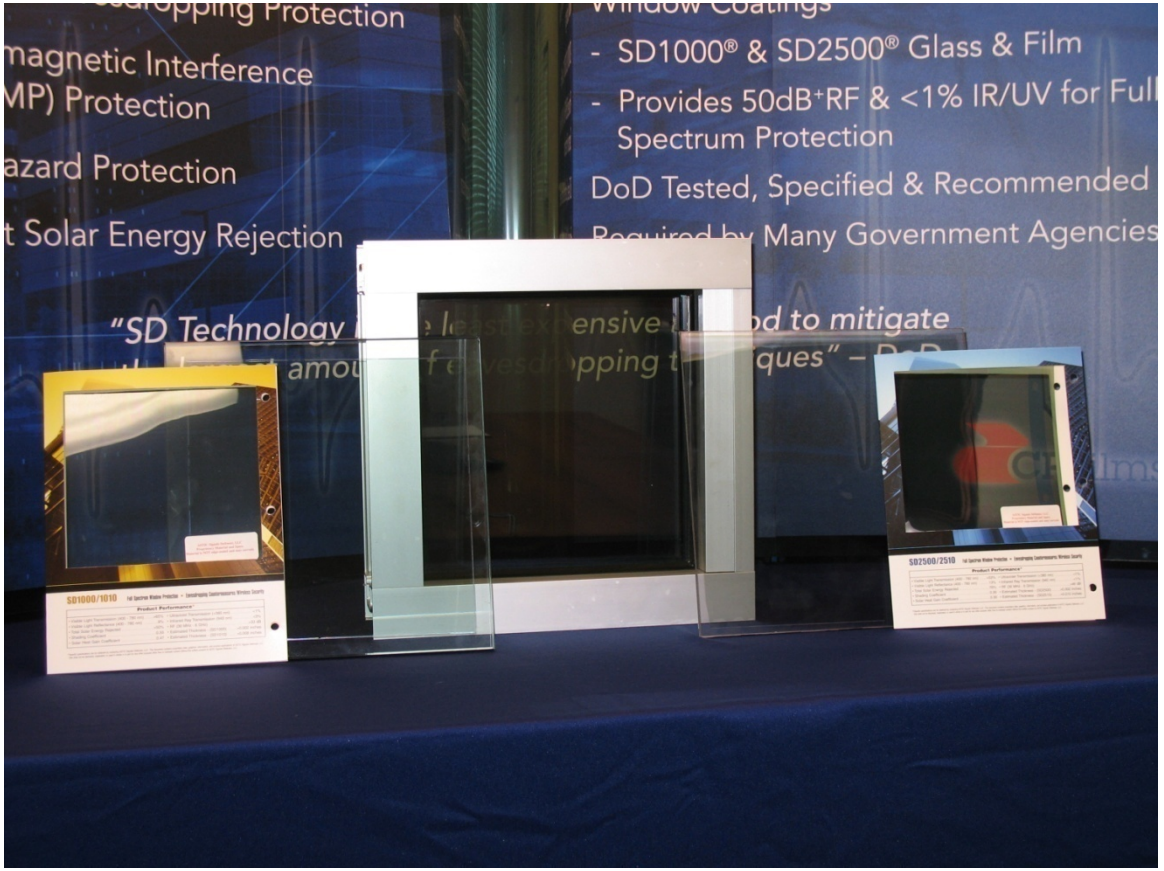
Surface-Applied Film, Polycarbonate and Laminated Glass



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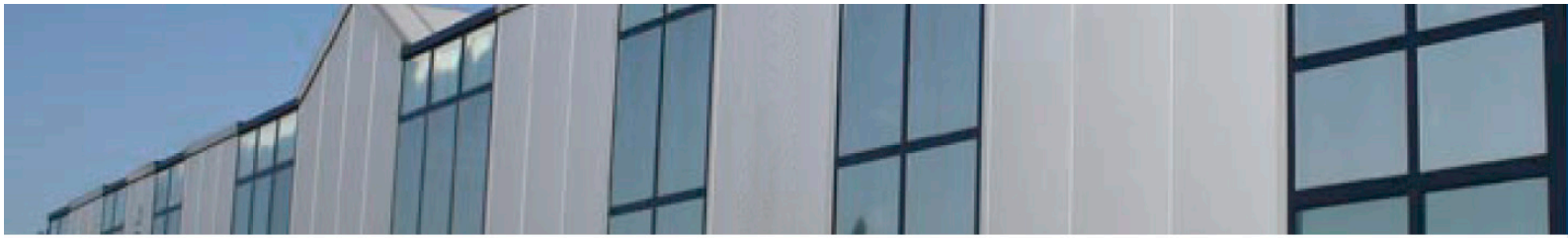

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Applications

Flat glass windows

Vehicles

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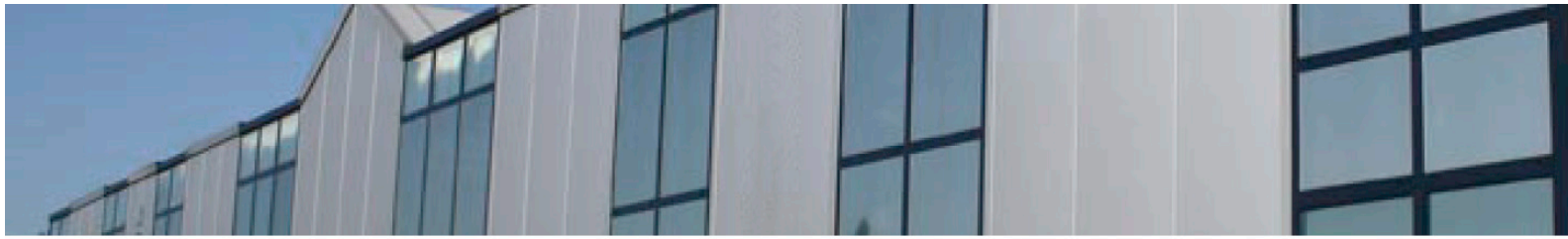

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Thank you very much for your attention!

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