

a magnetic stripe, it cannot be remotely read, is more difficult to encode and therefore impractical for this application.

Radio Frequency Tags

Radio Frequency Tags (RFID/radio frequency identification) can be used in conjunction with permits as a means to store information.

In their simplest form a tag may just contain a pre-encoded unique number. In the same way as a barcode, this number can be referenced to the permit. A reading device is then required to access the information on the device and as with barcode scanners the capabilities of tags and readers need to be matched.

More sophisticated tags can be written to with large amounts of data so that, for example, all of the permit and holder details can be stored. This information can be written onto the tag by the system operator and then read remotely. Theoretically then, a permit need not have any human readable details on it. In practice however flexibility and a "comfort factor" will probably necessitate having both.

Smart cards operating in isolation are unlikely to be practical for permits. Again it is a contact – read technology and therefore impractical behind a vehicle windscreen.

Devices on the market such as Park-o-Pin however open up the possibility of a more sophisticated solution to permit control. The device acts as an in-vehicle parking

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meter (IVPM) and operates in conjunction with a decrementing smartcard that holds parking “values”.

The IVPM can be set up to control permit parking as well as conventional paid parking. A permit holder therefore has the flexibility to use a common method for both. Furthermore, possession of the device is necessary in the first instance to gain access to the privileges that it bestows. Access to those privileges however is firmly in the control of the parking administrator.

Conclusion

The range of solutions to assist permit control is quite broad. Only a case-by-case evaluation can determine the most appropriate solution.

In many cases, a perceived level of security may be sufficient to deter attempted fraud. In situations where parking is particularly valuable more sophisticated solutions are likely to be needed.

A wide spectrum of security devices can be used to deter fraud. Changing these features regularly will help improve the deterrence factor.

The particular environment that permits are used in imposes certain restrictions. Some devices that provide very effective security may fail because they are hidden behind a vehicle windscreen.

The ultimate solution then combines practical consideration with a balanced view on perceived risk.

