

# **Silver Surfers - Under the Bonnet**

**SPREADSHEETS & DOCUMENTS**

**INTERNET**

**INTERNET OF THINGS**

6.01

There are several levels available to the user in using spreadsheets to tabulate and present data, and the deeper levels are something of an introduction to the art of programming.

The internet is evolving and we need to appreciate some of the factors in acquiring and using the facility.

The Internet of Things (IoT) is a relatively new term for a technology that has been around for several decades.

# Silver Surfers - Spreadsheets

**STANDARD USER CONTROLS**

**PIVOT TABLES**

**SCRIPTING**

**FORMS**

6.02

The spreadsheet has features that allow for column and row totalling and for entering arithmetic expressions. It also allows for conditional expressions that alter the way that a result appears.

Spreadsheets in practice can contain thousands of entries. To make sense of the data we need to be able to filter and summarise. A pivot table quickly organises the data into meaningful chunks.

Scripting allows us a much greater degree of control over both the user entering data and the manipulation of the data itself.

Spreadsheets can be linked to Forms so that as a form is returned the spreadsheet collects the data automatically.

## **Silver Surfers - Documents**

**TABLES**

**TRANSLATE**

**MAIL MERGE**

6.03

The word processing packages allow for the construction of tabular data, for the translation of documents and for the merging of standard text with a database of names and addresses.

## **Silver Surfers - Internet**

### **INTERNET CONNECTION**

### **SERVICE PROVIDER**

### **SPEED & COVERAGE**

### **DOMESTIC CONFIGURATION**

6.04

Currently the main type of internet connection is via a standard copper telephone into the home via a 'modem' connected to a 'router' or via a single box that performs the conversion of the telephone signal to a digital stream that can be routed to the computer devices either by cable or by wifi.

The basic connection will be by copper wire all the way from the exchange which, depending on the distance to the exchange, will make for a relatively slow internet. A better connection is achieved when an optic fibre cable is laid from the exchange to a local box with a copper bearer for the final leg to the house. The fastest connection is when fibre is used into the home as well.

In remoter areas a microwave link can be deployed with one or more local connections via cable or wifi. In some public areas a free wifi service may be provided. Satellite internet connections are also available at a cost.

There are a number of companies that will supply an internet service - beware of the marketing, read trusted reviews and ask friends and neighbours what their experience is. The service is often packaged to attract new subscribers who will then be charged a lot more for the following year. Beware particularly the headline speed which is rarely achievable and if you intend streaming films and TV go for the deal without a data limit.

Smartphones, some laptops and some tablets will use the wireless networks originally intended for mobile phones, So called 3G is available and 4G (much faster) is now

covering a high proportion of the UK population. The 5G network will operate at the sort of speeds we currently get on the Isle of Wight and is estimated to start rolling out in 2020.

Various websites can be used to measure the speed of your internet connection or to check the coverage of a mobile network:

<http://www.speedtest.net/>

<https://www.broadbandspeedchecker.co.uk/>

<https://www.4g.co.uk/coverage/>

Within the home the devices can be connected to the router by wireless or by cable. You may need to access the router to set passwords but the service provider should give you notes and recommendations.

## **Silver Surfers - Internet of Things**

**The Internet of things (IoT) is the network of physical devices, vehicles, home appliances and other items embedded with electronics, software, sensors, actuators, and connectivity which enables these objects to connect and exchange data**

## **Silver Surfers - Internet of Things**

**CCTV**

**VENDING MACHINE**

**WEATHER STATION**

**TRAFFIC LIGHTS**

6.06

Domestic CCTV is generally set up to record (day or night) either to a large storage device or to the cloud, often activated by motion detectors. You can monitor activity remotely via tablet or phone.

For some years vending machines have been online to warn operators of low product or faults.

Weather stations use remote data collection with only periodic human attendance.

City traffic lights and detectors feed data to central computers that assess traffic flow and adjust signals to optimise travel times.