

## **Are your passwords safe?**

The consequences of failing to adequately provide internet safety are increasingly prevalent in today's digital society, with privacy and security issues from the virtual world all too often materialising in the real world.

### **Size of your passwords**

The combination of different characters and the amount used determines the amount of permutations possible. The more you use the greater the permutations. This makes it harder for automated password cracking software to succeed and helps improve internet safety. Most sign-ups require passwords to be at least six characters long, but many require at least eight, which makes for a much harder password to crack. If this two character difference seems slight, consider this: a random six letter password drawn from the 26 alphabetic characters has 308,915,776 permutations, but an eight letter password an astonishing 208,827,064,576 – that's a multiple of 676 times more permutations. Typical password cracking software takes as little as thirty minutes to crack a six character password, but requires fourteen days for an eight character example.

### **Avoid the obvious**

We are what we know. It's all too easy to draw upon that which is obvious and common to us, such as our name, or our place and date of birth. Unfortunately these kinds of details can easily be discovered or anticipated by others, including both friends and strangers. It's vital to avoid these details in passwords if you want to achieve online safety. This approach is also advisable to improve internet safety when it comes to creating User or Profile names for online accounts, such as for gaming or social media activities.

### **If not the obvious, then what?**

One thing that distinguishes us from each other is our interests, so why not draw upon the topics and subjects that are relevant to us? For instance, if you enjoy reading then you can use this for inspiration. It could be a particular character from your favourite story, or better still a specific quote or line. It's very easy for an individual to remember details that have significance for them. Similar interests that can utilise this approach include song lyrics, and film or TV quotes.

### **Pick and mix**

The diverse use of keyboard characters will immeasurably strengthen the security of their password. There's more to a keyboard than just lowercase letters, including capital letters, numbers and special characters (anything that is neither a letter or number, such as £, &, \$ and %). A combination of these character sets makes it much harder for both humans and automated software to determine a password. The consequence however can be the increased difficulty of remembering these character's use. One way around this is the idea of substituting standard letters with numbers and special characters. Many are similar to letters (such as the number "3" which is like a reversed letter "E", or special character "£"). Simply using just one of these examples, in combination with capital letters and numbers, greatly enhances a password's security, and multiple usage even more so.

### **Careless talk costs lives**

It is absolutely vital that everyone keeps their passwords secret. This is also true of how we go about deciding our passwords. If someone knows the inspiration for a password, it increases the likelihood of discovery. Whatever the inspiration, keep it to yourselves. Just as important for providing internet safety is avoiding the common mistake of writing the password down. This is usually done when a password is not memorable, but if you follow the guidelines provided above, there should be no need to write it down in the first place. Finally, remember that a password is personal and precious, and as such should not be shared with anyone – not even close friends, and certainly not online friends or strangers.