Comparing C strings and descriptors

Introduction

Standard C strings and Symbian descriptors are by nature very different. The main difference is that descriptors know how many characters are in a data array. A C string doesn't know its length, so when length is needed, the NULL character that indicates the end of the string has to be scanned.

Another difference arises with buffers. When C code reserves a buffer from the heap or stack, it has to keep the maximum length somewhere. Many C methods that alter the buffer contents do not respect the maximum size of the buffer and can override the reserved memory, causing unknown behavior. Buffer descriptors can tell the maximum length, and all the methods they provide respect the buffer limits.

When using neutral descriptor types there is no need to worry about character widths. In a C program, the programmer has to explicitly specify which method to use, for example **strcat** or **wcscat**.

Functions

- Write formatted data to a string

C string

```
sprintf, swprintf
```

Symbian descriptor

```
TDes::Format
```

- Append a string to another

C string

```
strcat, wcscat, strncat, wcsncat
```

Symbian descriptor

```
TDes::Append
```

- Compare strings lexicographically

C string

```
strcmp, strncmp, wcsncmp
```

Symbian descriptor

```
TDesC::Compare
```

- Copy a string to another

C string

```
strcpy, wcscpy, strncpy, wcsncpy
```

Symbian descriptor

```
TDes::Copy
```

- Find a character in a string

C string

```
strchr, wcschr
```

Symbian descriptor

```
TDesC::Locate
```


(C) Copyright Nokia 2013. All rights reserved.

- Find a substring

C string

```
strstr, wcsstr
```

Symbian descriptor

```
TDesC::Find
```

- Get the length of a string

C string

```
strlen, wcslen
```

Symbian descriptor

```
TDesC::Length
```

- Compare strings using locale specific information

C string

```
strcoll, wcscoll
```

Symbian descriptor

```
TDesC::CompareC
```

- Format a time string

C string

```
strftime, wcsftime
```

Symbian descriptor

```
TDes::Format
```


(C) Copyright Nokia 2013. All rights reserved.

(C) Copyright Nokia 2013. All rights reserved.