USB Firmware Library Error

In the USB C18 firmware library, the header file, usbdrv.h (version 1.0 date 11/19/04), contains a firmware error. The following definitions are ambiguous:

```
#define EP00_OUT    (0x00<<3)|(OUT<<2)
#define EP00_IN     (0x00<<3)|(IN<<2)
#define EP01_OUT    (0x01<<3)|(OUT<<2)
#define EP01_IN     (0x01<<3)|(IN<<2)
#define EP02_OUT    (0x02<<3)|(OUT<<2)
#define EP02_IN     (0x02<<3)|(IN<<2)
#define EP03_OUT    (0x03<<3)|(OUT<<2)
#define EP03_IN     (0x03<<3)|(IN<<2)
#define EP04_OUT    (0x04<<3)|(OUT<<2)
#define EP04_IN     (0x04<<3)|(IN<<2)
#define EP05_OUT    (0x05<<3)|(OUT<<2)
#define EP05_IN     (0x05<<3)|(IN<<2)
#define EP06_OUT    (0x06<<3)|(OUT<<2)
#define EP06_IN     (0x06<<3)|(IN<<2)
#define EP07_OUT    (0x07<<3)|(OUT<<2)
#define EP07_IN     (0x07<<3)|(IN<<2)
#define EP08_OUT    (0x08<<3)|(OUT<<2)
#define EP08_IN     (0x08<<3)|(IN<<2)
#define EP09_OUT    (0x09<<3)|(OUT<<2)
#define EP09_IN     (0x09<<3)|(IN<<2)
#define EP10_OUT    (0x0A<<3)|(OUT<<2)
#define EP10_IN     (0x0A<<3)|(IN<<2)
#define EP11_OUT    (0x0B<<3)|(OUT<<2)
#define EP11_IN     (0x0B<<3)|(IN<<2)
#define EP12_OUT    (0x0C<<3)|(OUT<<2)
#define EP12_IN     (0x0C<<3)|(IN<<2)
#define EP13_OUT    (0x0D<<3)|(OUT<<2)
#define EP13_IN     (0x0D<<3)|(IN<<2)
#define EP14_OUT    (0x0E<<3)|(OUT<<2)
#define EP14_IN     (0x0E<<3)|(IN<<2)
#define EP15_OUT    (0x0F<<3)|(OUT<<2)
#define EP15_IN     (0x0F<<3)|(IN<<2)
```

The above definitions are ambiguous because when used in the following context, it would produce incorrect operation. For example:

```
if(USTAT == EP00_IN)
{
        //…
}
```

This would be the same as writing:

```
if(USTAT == (0x00<<3)|(IN<<2))
{
        //…
}
```

In the example above, the program first compares USTAT to (0x00<<3) then bitwise ORed the result with (IN<<2).

This is not the intent of the program, USAT should have been compared to the ORed value of (0x00<<3) and (IN<<2). To correct this, add extra parenthesis to the definitions in usbdrv.h as shown below:

```
#define EP00_OUT    ((0x00<<3)|(OUT<<2))
#define EP00_IN     ((0x00<<3)|(IN<<2))
#define EP01_OUT    ((0x01<<3)|(OUT<<2))
#define EP01_IN     ((0x01<<3)|(IN<<2))
#define EP02_OUT    ((0x02<<3)|(OUT<<2))
#define EP02_IN     ((0x02<<3)|(IN<<2))
#define EP03_OUT    ((0x03<<3)|(OUT<<2))
#define EP03_IN     ((0x03<<3)|(IN<<2))
#define EP04_OUT    ((0x04<<3)|(OUT<<2))
#define EP04_IN     ((0x04<<3)|(IN<<2))
#define EP05_OUT    ((0x05<<3)|(OUT<<2))
#define EP05_IN     ((0x05<<3)|(IN<<2))
#define EP06_OUT    ((0x06<<3)|(OUT<<2))
#define EP06_IN     ((0x06<<3)|(IN<<2))
#define EP07_OUT    ((0x07<<3)|(OUT<<2))
#define EP07_IN     ((0x07<<3)|(IN<<2))
#define EP08_OUT    ((0x08<<3)|(OUT<<2))
#define EP08_IN     ((0x08<<3)|(IN<<2))
#define EP09_OUT    ((0x09<<3)|(OUT<<2))
#define EP09_IN     ((0x09<<3)|(IN<<2))
#define EP10_OUT    ((0x0A<<3)|(OUT<<2))
#define EP10_IN     ((0x0A<<3)|(IN<<2))
#define EP11_OUT    ((0x0B<<3)|(OUT<<2))
#define EP11_IN     ((0x0B<<3)|(IN<<2))
#define EP12_OUT    ((0x0C<<3)|(OUT<<2))
#define EP12_IN     ((0x0C<<3)|(IN<<2))
#define EP13_OUT    ((0x0D<<3)|(OUT<<2))
#define EP13_IN     ((0x0D<<3)|(IN<<2))
#define EP14_OUT    ((0x0E<<3)|(OUT<<2))
#define EP14_IN     ((0x0E<<3)|(IN<<2))
#define EP15_OUT    ((0x0F<<3)|(OUT<<2))
#define EP15_IN     ((0x0F<<3)|(IN<<2))
```