

## 1. Function and Use.

This small program will convert Big 5 encoded Chinese characters into a ‘preprocessed’ form. The need of this program arises from the fact that this encoding uses the characters ‘\’, ‘{’, and ‘}’ which have special meanings in T<sub>E</sub>X.

Use this program as a filter:

```
bg5conv < input_file > output_file
```

## 2. The program.

The only function of this program is to replace all occurrences of Big 5 encoded characters  $XY$  ( $X$  and  $Y$  are the first and the second byte of the character) with  $\text{\textasciix7f}X\text{\textasciix7f}ZZZ\text{\textasciix7f}$ , where  $ZZZ$  represents the second byte as a decimal number.  $0x7F$  is used as an active character and delimiter.

Additionally we define a  $\text{\TeX}$  macro at the very beginning to signal a preprocessed file.

The following code is very simple. No error detection is done because  $\text{\TeX}$  which will see the output of `bg5conv` complains loudly if something is wrong.

```
#define banner "bg5conv\_(CJK\ver\4.5.2)"
#include <stdio.h>
#include <stdlib.h>

int main(argc, argv)
    int argc;
    char *argv[];
{int ch;

    fprintf(stdout, "\\def\\CJKpreproc{%s}", banner);

    ch = fgetc(stdin);

    while (!feof(stdin))
    {if (ch ≥ #A1 ∧ ch ≤ #FE)
        {fprintf(stdout, "\\177%c\\177", ch);

            ch = fgetc(stdin);
            if (!feof(stdin))
                fprintf(stdout, "%d\\177", ch);
        }
        else
            fputc(ch, stdout);

        ch = fgetc(stdin);
    }
    exit(EXIT_SUCCESS);
    return 0;
}
```

/\* never reached \*/