Chapter 6

Implementation

6.1 Implementation of RWS

6.1.1 Implementation of Example 2.9

The computation of Example 2.9 was done by the following C program.

```c
/*===========================================================*/
/*  file name: rws_example.c                                 */
/*===========================================================*/
#include <stdio.h>

#define SAMPLE_NUM 1000000
#define M          100
#define M_PLUS_J   119

/* seed */
char xch[M_PLUS_J] =
   "1110110101" "1011101101" "0100000011" "0110101001" "0101000100"
   "0101111101" "1010000000" "1010100011" "0100011001" "1101111101"
   "1101010011" "111100100";
char ach[M_PLUS_J] =
   "1100000111" "0111000100" "0001101011" "1001000001" "0010001000"
   "1010101101" "1110101110" "0010010011" "1000000011" "0101000110"
   "0101110010" "010111111";

int  x[M_PLUS_J], a[M_PLUS_J];

void longadd(void)   /* x = x + a ( long digit addition ) */
{
 int i, s, carry = 0;
 for ( i = M_PLUS_J-1; i >= 0; i-- ){
   s = x[i] + a[i] + carry;
   if ( s >= 2 ) {carry = 1; s = s - 2; } else carry = 0;
   x[i] =  s;
```