# THE CONTROL CHARACTER FOR VERIFYING THE AUTHENTICITY OF FINNISH BUSINESS IDS AND PERSONAL IDENTITY CODES

#### **Business IDs**

Business IDs are comprised of an individualized string of numbers and a control character, in that order. The individualized string consists of seven numbers that run in sequence.

The format of the ID is NNNNNNN-T, in which the "NNNNNNN" is the number running in sequence, and "T" – the control character.

The following calculation formula is used:

1. Multiply, starting from the right, each one of the digits in "NNNNNNN":

Multiply the first	by	2
Multiply the second	by	4
Multiply the third	by	8
Multiply the fourth	by	5
Multiply the fifth	by	10
Multiply the sixth	by	9
and the seventh	bv	7

- 2. Add all the products of the above multiplication together.
- 3. Divide the sum by 11.
- 4. The control character must be set as:
  - 0 if the remainder = 0 after the division 11–the remainder, if the remainder > 1 after the division

If the remainder after the division equals 1, the Business ID is not valid.

If you have a sub-accounting unit ID, you can use it for verifying the control character of the company's main Business ID (the control character is the 8<sup>th</sup> character from left).

# **PERSONAL IDs**

Finnish personal identity codes are issued by the Population Register Centre. They consist of a string of numbers that indicates the individual's date of birth, an individualized string, and a control character.

Date of Birth – middle character – individualized string – control character: 131052-308T

#### Date of birth

The format of the date is six digits: days are indicated by the first two, months by the third and second; and the year is indicated by the fifth and sixth digits.

# The character in the middle

The convention for the mid-character is:

Year of birth in 1800's  $\rightarrow$  + (the plus sign), Year of birth in 1900's  $\rightarrow$  - (the minus sign), and Year of birth in 2000's  $\rightarrow$  A (the capital 'A').

# The individualized string

The purpose is to differentiate between people born on the same day. Individualized strings are numbers consisting of three digits: it is an odd number for men, and an even number for women.

# The control character

The control character is either a number or a letter. The calculation formula is to divide the value of the nine-digit string made up by the date of birth and the individualized string by 31. Then the control character is determined by the value of the remainder:

Remain-	Control	Remain-	Control	Remain-	Control
der	character	der	character	der	character
0	0	11	В	21	N
1	1	12	С	22	Р
2	2	13	D	23	R
3	3	14	E	24	S
4	4	15	F	25	T
5	5	16	Н	26	U
6	6	17	J	27	V
7	7	18	K	28	W
8	8	19	L	29	Χ
9	9	20	M	30	Υ
10			Α		

You must compare the control character resulting from the formula with the control character of the personal ID you need to check.

When filling in an itemization, do not leave out the hyphens and other mid-characters of Business IDs and Personal IDs.