Rekurzivno kod

I. $o(x) \simeq \lambda x[0]$

II. $s(x) \simeq \lambda x[x+1]$

III. $I_n^i(x_1 \dots x_n) = \lambda x_1 \dots x_n [x_i]$ (projekcija)

IV. supstitucija $f, g_1 \dots g_m$ (ako m promenljivih)

$S_m^n(f, g_1, \dots, g_m) \to h(g_1(\vec{x}), \dots g_m(\vec{x}))$ ($x_1 \dots x_n$)

V rekurzija (primitivna) (ako n promenljivih)

$R_n(f, g) \to h(0, x_2, \dots, x_n) = f(x_2, \dots x_n)$ (n-1 promen.)

$h(y+1, x_2, \dots, x_n) \simeq g(y, h(y, x_2 \dots x_n), x_2 \dots x_n)$ (n+1 promen.)

$h := f(x_2, \dots x_n)$
for $y := 0$ to $x_1 - 1$ do
$h := g(y, h, x_2 \dots x_n)$
done

1) $f(x+y)$

$f_1 = S(x)$
$f_2 = I_1^1(x)$
$f_3 = I_3^3(x_1, x_2, x_3) = \lambda x_1 x_2 x_3 [x_2]$
$f_4 = S_3^1(f_1, f_3) = \lambda x_1 x_2 x_3 [x_2 + 1]$
$f_5 = R_2(f_2, f_4)$

$S(x_2) \leftarrow \lambda x_1 x_2 x_3 [\dots]$

$S_3^1(S(x), I_3^3(x_1 x_2 x_3)) = S_3^1(S(x), x_2)$

$f_5(0, x_2) = x_2$

$f_5(x_1+1, x_2) = f_5(x_1, f_5(x_1, x_2), x_2) = f_5(x_1, x_2) + 1$

2) $f(x \cdot y)$ $\quad f_6 = R_2(o, [\text{redacted}])$

$h(0, x) = o(x)$

$h(y+1, x) = g(1, [\text{redacted}], h(y, x), x)$

$g = f_5(h(y, x), I_2^2(y, x))$ $\quad g = \lambda x_1 x_2 x_3 [x_2 + x_3]$

3) $f(x \dot{-} y)$

$\max\{0, x-y\}$

$\cdot(x, y) = R_2(o, S_3^2(+, I_3^2, \overset{3.}{I_3^1}))$

1) $c_2(x) \simeq \lambda x [2]$

$c_0(x) \simeq o(x)$

$c_{2^x} = S_1^1(\Delta, c_{2^{x-1}})$

2) $x! \dots f(x)$

$0! = 1 \quad f(0) = 1$

$f(1) = 1 \cdot f(0)$ $\quad f_4(x) = x \cdot f(x-1)$

$S_3^1(\Delta, I_3^1)$ (x_1)

supstitucija x_1 sa $x_1 + 1$; x_1 je ta 3 promenljive

$S_3^2(\cdot, I_3^2, S_3^1(\Delta, I_3^1))$ (x_1, x_2)

supstitucija x_1, x_2 sa $x_1 \cdot x_2$

inicijalizacija

$S_1^2(R_2(o, S_3^2(\cdot, I_3^2, S_3^1(\Delta, I_3^1))), I_1^1, o)$

ako dođe $(1, x)$ da ne $(0, x-1)$

4 Rekurzija

prvi slučaj 0^{ti} slavenske poslednji prvi