S: Start Symbol

B: Block

V: Declaration of Variables

P: Procedure declaration

Pdef: Procedure definition

VP: Declaration of Variables and Procedure declaration

Ins: Sequence of instructions

Cm: Command

CtS: Control Structure

Id: Variable or procedure identifier

LV: List of variables

PD: Procedure definition

IdP: name of a procedure

IdV: name of a variable

Note: I will consider that variables must be declared previously. That it has got to have VARS and PROCS. It can’t be empty and VARS can’t end witout a ; Id es equivalent to name

\*variables listo

\*Falta definer cada instrucciones específica

S → “kw ROBOT\_R”*,* S’

S’ → B

B → “sp [”*,* Ins*,* “sp ]”

Ins → Cm*,* Ins’

Ins → CtS*,* Ins’

Ins → IdP*,* Ins’

Ins’ → “sp ;”*,* Ins

Ins’ → λ

Cm → assignTo

Cm → goto

Cm → move

Cm → turn

Cm → face

Cm → put

Cm → pick

Cm → moveToThe

Cm → moveInDir

Cm → jumpToThe

Cm → jumpInDir

Cm → nop

CtS → Conditional

CtS → Loop

CtS → RepeatTimes

IdP → “id {A# chars}” *\*if there is not VP, it would be an error*

S’ → VP*,* B

VP → “kw VARS”*,* LV*,* “sp ;”*,* “kw PROCS”*,* PD

LV → IdV*,* LV’

LV’→ “sp ,”*,* LV

LV’→ λ

IdV → “id {A# chars}” *\*fin variables*

PD → Pdef*,* PD’

PD’ → PD

PD’ → λ

GOTO → “cm goto”*,* “sp :”*,* x*,* “sp ,”*,* y*,* Ins

x → Int

y → Int

x → id

y → id

Ins → λ

I

Kw ROBOT\_R B

Sp [ Ins sp ]

cm goto sp : x sp , y ins

int int λ

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