Preliminary specification of BALMSETL conventions. D. Shields

BALMSETL - Preliminary representation of SETL operations

All SETL infix operators have corresponding BALMSETL infix
operator; except that following short forms should be avoided

<u>u</u>   <u>a</u>   <u>n</u>   <u>imp</u>   <u>t</u>   <u>f</u> .

Each infix operator will have a procedural form.
The procedure name is just the name of the operator with
a suffixed P. Thus, one can write ANDP(A,B) for A AND B,
UNIONP(A,B)   for   A UNION B,   etc.

The following table gives correspondence for SETL special
symbols and BALM SETL representation

SETL	BALMSETL INFIX	BALMSETL PROCEDURAL
a + b	A + B	PLP(A,B)
a - b	A - B	MIP(A,B)
a * b	A * B	MUP(A,B)
a / b	A / B	DIP(A,B)
a//b	M MOD B	MODP(A,B)
a ϵ b	A EL B	ELP(A,B)
$\ni a$	ARB A	ARBP(A)
#a	SIZ A	SIZP(A)
a = b	A = B	EQUALP(A,B)

The SETL booleans <u>t</u> <u>f</u> are to be written in BALMSETL as
TRUE, FALSE, respectively; Ω, ϕ are represented in BALMSETL
by UNDEF, NL, respectively.
Sets and tuples may be defined by enumeration:

SETL	BALMSETL
{a,b,c}	MAKSET(A,B,C)
<a,b,c>	MAKTUP(A,B,C)

The following is a preliminary list of SETL constants and
the corresponding BALMSETL form.

SETL	BALMSETL INFIX	BALMSETL PROCEDURAL
$f(x)$	F OF X	OFP(F,X)
$f\{x\}$	F SOF X	SOFP(F,X)
$f[x]$	F UOF X	UOFP(F,X)
$(\exists x \varepsilon a \mid p(x))$	A EXIST P	EXISTP(A,P)
$(\forall x \varepsilon a \mid p(x))$	A UNIV P	UNIVP(A,P)
$(\exists [x] \varepsilon a \mid p(x))$		AEXISTP(X,A,P)

to be specified:

1. Set-former
2. Form of set-theoretic iteration
3. Form of while-iteration
4. I/O conventions
5. Conventions to executed BALMSETL code using BALM system-
   batch and INTERCOM (teletype).