

A/

1) ?

2) Group = "# GROUP:" groupName CRLF  
 \*(status CRLF)  
 "#"

Status = \*(ALPHA) 1\*2(DIGIT)

GroupName = (\*ALPHA \*DIGIT) / (\*DIGIT \*ALPHA)

Access: "H ACCESS:" accessName CRLF

((("status:" date ">>")) / ("status:" date ">> date" /  
 ("group Name:" date) / (condition)) CRLF)

AccessName: (\*ALPHA \*DIGIT) / (\*DIGIT \*ALPHA) <sup>AccessName</sup>

Date: ("Year" - "month" - "year" z "Hour" h "minute" s "seconds" UTC) /  
 ("year" - "month" - "Year" z "Hour" h "minute" s "seconds" UTC)

Year: "1" [DIGIT] / "2" [DIGIT] / "31" / "30" / "0" [1-31-39]  
 Month: "0" [1-31-39] / "10" / "11" / "12"  
 Year: "20" 2 DIGIT  
 Hour: "0" [DIGIT] / "1" [DIGIT] / "23" / "22" / "20" / "23"  
 Minute: [1-30-35] [DIGIT]  
 Second: Minute

Condition: (IF %USER% z "groupname") /  
 (IF %TIME% > %TODAY% - Hourize "AND %TIME% < %TODAY% + 2% - Hourize)) CRLF  
 "CLOSE" CRLF  
 \*(ENDIF CRLF)  
 "#"

3/ Detected Object:

Sort: DO < Float x Float >

Reference: Float

• Signature:

= Create DO: Float x Float → DO

= Lat: DO → Float

= Long: DO → Float

= DA: DO x DO x Float → Float

• Axioms

- DistApp(Create DO(0,0), DO) = DistApp(DO, Create DO(0,0)) = 0  $\sqrt{(\text{Lat}(DO) - \text{Lat}(DO))^2 + (\text{Long}(DO) - \text{Long}(DO))^2}$

- DistApp(DO1, DO2) = DistApp(DO1, Create DO(0,0)) + DistApp(Create DO(0,0), DO2)

Solve:  $MR \langle Float \times Float \rangle$

References:  $Float, DO, Int$

• Signature

Create:  $Float \times Float \rightarrow MR$

Add:  $MR \times DO \rightarrow MR$

Size:  $MR \rightarrow Int$

ONT:  $MR \times Float \rightarrow MR$

• Axioms

$$LatMR(Create(P_r, P_g)) = P_r$$

$$LngMR(Create(P_r, P_g)) = P_g$$

$$LatMR(Add(m, do)) = LatMR(m)$$

$$LngMR(Add(m, do)) = LngMR(m)$$

$$ONT(Create(P_r, P_g), n) = Create(P_r, P_g)$$

$$ONT(Add(m, do), n) = 0 \text{ si } n \leq 0 \vee Size(m) \forall m \in n$$

$$Size(Create(P_r, P_g)) = 1$$

$$Size(Add(m, do)) = \text{si } !Apparent(m, do) \text{ alors } Size(m) + 1 \text{ sinon } Size(m)$$