

# Appendix A

## Learning a Motion Pattern from Video Data



Figure A.1: Follow Pattern: Tracked Persons in First Instance (same as Figure in section 6.2)

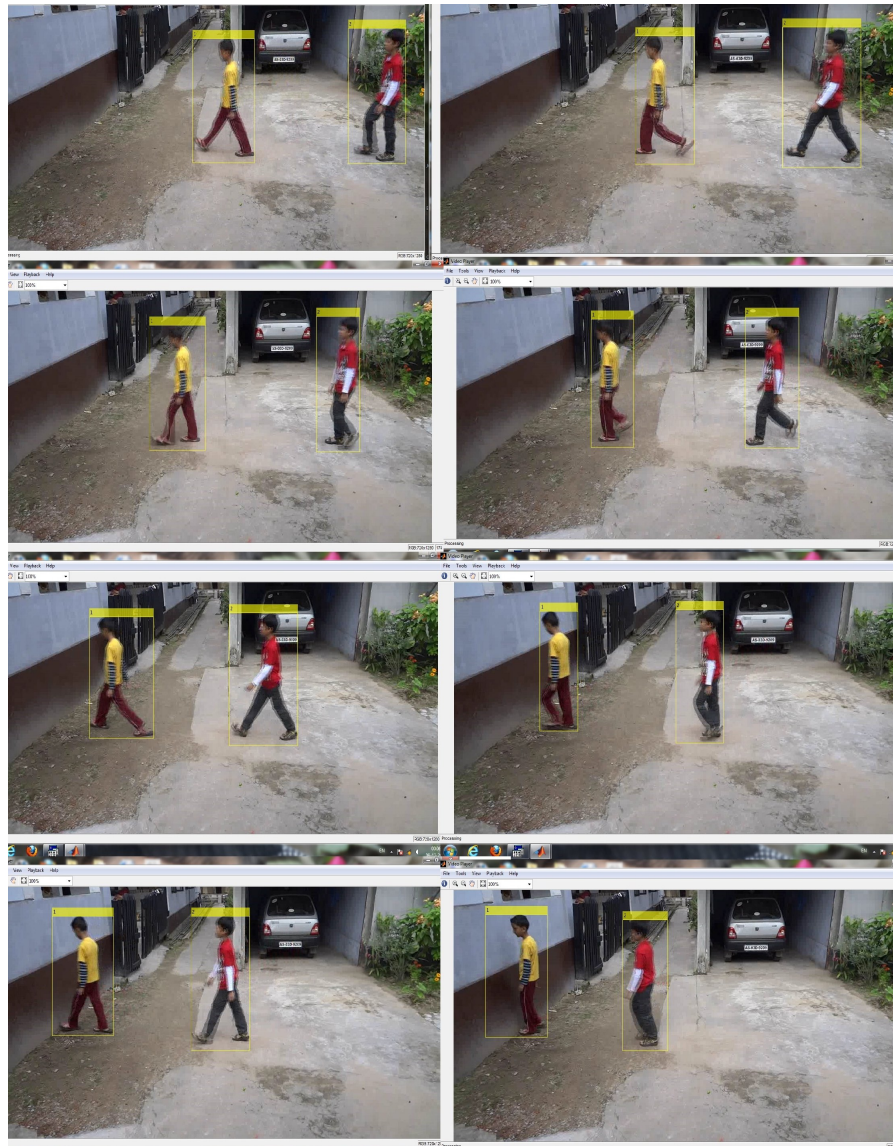


Figure A.2: Follow Pattern: Tracked Persons in Second Instance (same as Figure in section 6.2)

**Discontinuous Binary Motion Pattern for First Instance of Follow**

(B, Same+)  
(B, Same-)  
(B, rl-)  
(B&L, Opposite)  
(B&L, Opposite)  
(B&L, Opposite)  
(B&L, Opposite)  
(B&L, rl-)  
(B&LO, rl-)  
(B&LO, rl+)  
(B&LO, rl-)  
(B&LO, Same+)  
(B&LO, rl-)  
(B&LO, Opposite)  
(B&LO, Same+)  
(B&LO, Opposite)  
(B&LO, lr+)  
(B&LO, Opposite+)  
(B&L, rl-)  
(B&LO, Opposite)  
(B&L, Opposite-)  
(B&L, rl-)  
(B&LO, Opposite+)  
(B&L, rl)  
(B&LO, lr+)  
(B&LO, rl-)  
(B&LO, Opposite+)  
(B&L, Opposite)  
(B&L, Opposite)  
(B&L, Opposite+)  
(B&L, Opposite)  
(B&L, Same+)  
(B&L, Opposite)  
(B&L, rl+)  
(B&L, rl-)  
(B&L, lr+)  
(B&L, Same+)  
(B&L, rl)  
(B&L, Opposite)  
(B&L, Opposite)  
(B&L, lr+)  
(B&L, Opposite+)  
(B&L, Opposite)  
(B&L, Opposite)

**Continuous Binary Motion Pattern for First Instance of Follow**

Name=Follow

(Same+, B); (Same, B); (Same-, B); (Same, B); (Same+, B); (rl-, B); (rl, B&L); (rl+, B&L); (Opposite-, B&L); (Opposite, B&L); (Opposite, B&L); (Opposite-, B&L); (rl+, B&L); (rl, B&L); (rl-, B&L); (rl-, B&LO); (rl-, B&LO); (rl, B&LO); (rl+, B&LO); (rl, B&LO); (rl-, B&LO); (Same+, B&LO); (rl-, B&LO); (rl, B&LO); (rl+, B&LO); (Opposite-, B&LO); (Opposite, B&LO); (Opposite-, B&LO); (rl+, B&LO); (rl, B&LO); (rl-, B&LO); (Same+, B&LO); (rl-, B&LO); (rl, B&LO); (rl+, B&LO); (Opposite-, B&LO); (Opposite, B&LO); (Opposite+, B&LO); (lr-, B&LO); (lr, B&LO); (lr+, B&LO); (Same-, B&LO); (lr-, B&LO); (Opposite+, B&LO); (Opposite, B&L); (Opposite-, B&L); (rl+, B&L); (rl, B&L); (rl-, B&L); (rl-, B&L); (rl, B&LO); (rl+, B&LO); (Opposite-, B&LO); (Opposite, B&LO); (Opposite+, B&LO); (Opposite+, B&LO); (Opposite, B&L); (Opposite-, B&L); (rl+, B&L); (rl, B&L); (rl, B&L); (rl-, B&LO); (Same+, B&LO); (Same, B&LO); (Same-, B&LO); (lr+, B&LO); (lr+, B&LO); (Same-, B&LO); (Same, B&LO); (Same+, B&LO); (rl-, B&LO); (rl, B&LO); (rl+, B&LO); (Opposite-, B&LO); (Opposite, B&LO); (Opposite+, B&LO); (Opposite, B&L); (Opposite-, B&L); (Opposite, B&L); (Opposite+, B&L); (Opposite-, B&L); (rl+, B&L); (rl, B&L); (rl-, B&L); (Same+, B&L); (rl-, B&L); (rl, B&L); (rl+, B&L); (Opposite-, B&L); (Opposite, B&L); (Opposite-, B&L); (rl+, B&L); (rl, B&L); (rl-, B&L); (Same+, B&L); (Same, B&L); (Same-, B&L); (lr+, B&L); (Same-, B&L); (Same, B&L); (Same+, B&L); (rl-, B&L); (rl, B&L); (rl+, B&L); (Opposite-, B&L); (Opposite, B&L); (Opposite+, B&L); (lr-, B&L); (lr, B&L); (lr+, B&L); (Same-, B&L); (lr-, B&L); (Opposite+, B&L); (Opposite, B&L);

**Learnt Regular Grammar for First Instance of Follow**

S -> X0  
X0 -> A0  
A0 -> (Same+,B) A1  
A1 -> (Same,B) A2  
A2 -> (Same-,B) A3  
A3 -> (Same,B) A4  
A4 -> (Same+,B) A5  
A5 -> (rl-,B) A6  
A6 -> (rl, B&L) A7  
A7 -> (rl+, B&L) A8  
A8 -> (Opposite-, B&L) A9  
A9 -> (Opposite, B&L) A10  
A10 -> (Opposite,B&L) A11  
A11 -> (Opposite-,B&L) A12  
A12 -> (rl+,B&L) A13  
A13 -> (rl,B&L) A14  
A14 -> (rl-,B&L) A15  
A15 -> (rl-, B&LO) A16  
A16 -> (rl-,B&LO) A17  
A17 -> (rl,B&LO) A18  
A18 -> (rl+,B&LO) A19  
A19 -> (rl,B&LO) A20  
A20 -> (rl-,B&LO) A21  
A21 -> (Same+,B&LO) A22  
A22 -> (rl-,B&LO) A23  
A23 -> (rl,B&LO) A24  
A24 -> (rl+,B&LO) A25  
A25 -> (Opposite-,B&LO) A26  
A26 -> (Opposite,B&LO) A27  
A27 -> (Opposite-,B&LO) A28  
A28 -> (rl+,B&LO) A29  
A29 -> (rl,B&LO) A30  
A30 -> (rl-,B&LO) A31  
A31 -> (Same+,B&LO) A32  
A32 -> (rl-,B&LO) A33  
A33 -> (rl,B&LO) A34  
A34 -> (rl+,B&LO) A35  
A35 -> (Opposite-,B&LO) A36  
A36 -> (Opposite,B&LO) A37  
A37 -> (Opposite+,B&LO) A38  
A38 -> (lr-,B&LO) A39  
A39 -> (lr,B&LO) A40  
A40 -> (lr+,B&LO) A41  
A41 -> (Same-,B&LO) A42  
A42 -> (lr-,B&LO) A43  
A43 -> (Opposite+,B&LO) A44  
A44 -> (Opposite, B&L) A45  
A45 -> (Opposite-, B&L) A46  
A46 -> (rl+, B&L) A47  
A47 -> (rl, B&L) A48  
A48 -> (rl-, B&L) A49  
A49 -> (rl-,B&L) A50  
A50 -> (rl, B&LO) A51

**Learnt Regular Grammar for First Instance of Follow**

A51 -> (rl+, B&LO) A52  
A52 -> (Opposite-, B&LO) A53  
A53 -> (Opposite, B&LO) A54  
A54 -> (Opposite,B&LO) A55  
A55 -> (Opposite-, B&L) A56  
A56 -> (Opposite-,B&L) A57  
A57 -> (rl+,B&L) A58  
A58 -> (rl,B&L) A59  
A59 -> (rl-,B&L) A60  
A60 -> (rl, B&LO) A61  
A61 -> (rl+, B&LO) A62  
A62 -> (Opposite-, B&LO) A63  
A63 -> (Opposite, B&LO) A64  
A64 -> (Opposite+, B&LO) A65  
A65 -> (Opposite+,B&LO) A66  
A66 -> (Opposite, B&L) A67  
A67 -> (Opposite-, B&L) A68  
A68 -> (rl+, B&L) A69  
A69 -> (rl, B&L) A70  
A70 -> (rl,B&L) A71  
A71 -> ( rl-, B&LO) A72  
A72 -> (Same+, B&LO) A73  
A73 -> (Same, B&LO) A74  
A74 -> (Same-, B&LO) A75  
A75 -> (lr+, B&LO) A76  
A76 -> (lr+,B&LO) A77  
A77 -> (Same-,B&LO) A78  
A78 -> (Same,B&LO) A79  
A79 -> (Same+,B&LO) A80  
A80 -> (rl-,B&LO) A81  
A81 -> (rl,B&LO) A82  
A82 -> (rl+,B&LO) A83  
A83 -> (Opposite-,B&LO) A84  
A84 -> (Opposite,B&LO) A85  
A85 -> (Opposite+,B&LO) A86  
A86 -> (Opposite, B&L) A87  
A87 -> (Opposite,B&L) A88  
A88 -> (Opposite+,B&L) A89  
A89 -> (Opposite,B&L) A90  
A90 -> (Opposite-,B&L) A91  
A91 -> (rl+,B&L) A92  
A92 -> (rl,B&L) A93  
A93 -> (rl-,B&L) A94  
A94 -> (Same+,B&L) A95  
A95 -> (rl-,B&L) A96  
A96 -> (rl,B&L) A97  
A97 -> (rl+,B&L) A98  
A98 -> (Opposite-,B&L) A99  
A99 -> (Opposite,B&L) A100  
A100 -> (Opposite-,B&L) A101

**Learnt Regular Grammar for First Instance of Follow**

A101 -> (rl+,B&L) A102  
A102 -> (rl,B&L) A103  
A103 -> (rl-,B&L) A104  
A104 -> (Same+,B&L) A105  
A105 -> (Same,B&L) A106  
A106 -> (Same-,B&L) A107  
A107 -> (lr+,B&L) A108  
A108 -> (Same-,B&L) A109  
A109 -> (Same,B&L) A110  
A110 -> (Same+,B&L) A111  
A111 -> (rl-,B&L) A112  
A112 -> (rl,B&L) A113  
A113 -> ( rl+,B&L) A114  
A114 -> (Opposite-,B&L) A115  
A115 -> (Opposite,B&L) A116  
A116 -> (Opposite+,B&L) A117  
A117 -> (lr-,B&L) A118  
A118 -> (lr,B&L) A119  
A119 -> (lr+,B&L) A120  
A120 -> (Same-,B&L) A121  
A121 -> (lr-,B&L) A122  
A122 -> (Opposite+,B&L) A123  
A123 ->  $\epsilon$

**Discontinuous Binary Motion Pattern for Second Instance of Follow**

(B&R, lr+)  
(B&R, lr+)  
(B&R, lr-)  
(B&R, lr+)  
(B&R, lr+)  
(B&R, Opposite)  
(B&R, Opposite)  
(B&R, rl-)  
(B&R, Opposite)  
(B&R, Opposite+)  
(B&R, Opposite)  
(B&R, Opposite)  
(B&R, Opposite)  
(B&R, Same+)  
(B&R, Same+)  
(B&R, Opposite)  
(B&R, lr+)  
(B&R, Opposite)  
(B&R, Opposite)  
(B&R, Same+)  
(B&R, rl-)  
(B&R, lr)  
(B&R, Opposite)  
(B&R, lr-)  
(B&R, Opposite)  
(B&R, Opposite)  
(B&R, Opposite)  
(B&R, Opposite)  
(B&R, rl-)  
(B&R, Same+)  
(B&R, Opposite+)  
(B&R, Opposite)  
(B&R, Opposite)  
(B&R, Opposite)  
(B&R, Opposite)  
(B&R, Opposite)  
(B&R, Opposite)  
(B&R, rl+)  
(B&R, Same-)  
(B&R, lr+)  
(B&R, rl-)



**Continuous Binary Motion Pattern for Second Instance of Follow**

Name=Follow

(lr+,B&R);(Same-,B&R);(lr-,B&R);(lr,B&R);(lr+,B&R);(Same-,B&R);(lr-,  
,B&R);(Opposite+,B&R);(Opposite,B&R);(Opposite-  
,B&R);(rl+,B&R);(rl,B&R);(rl-,B&R);(rl,B&R);(rl+,B&R);(Opposite-  
,B&R);(Opposite,B&R);(Opposite+,B&R);(Opposite,B&R);(Opposite-  
,B&R);(rl+,B&R);(rl,B&R);(rl-,B&R);(Same+,B&R);(rl-  
,B&R);(rl,B&R);(rl+,B&R);(Opposite-  
,B&R);(Opposite,B&R);(Opposite+,B&R);(lr-  
,B&R);(lr,B&R);(lr+,B&R);(Same-,B&R);(lr-  
,B&R);(Opposite+,B&R);(Opposite,B&R);(Opposite-  
,B&R);(rl+,B&R);(rl,B&R);(rl-,B&R);(Same+,B&R);(rl-  
,B&R);(Same+,B&R);(Same,B&R);(Same-,B&R);(lr-,B&R);(lr,B&R);(lr-  
,B&R);(Opposite+,B&R);(Opposite,B&R);(Opposite+,B&R);(lr-  
,B&R);(Opposite+,B&R);(Opposite,B&R);(Opposite-  
,B&R);(rl+,B&R);(rl,B&R);(rl-,B&R);(Same+,B&R);(Same,B&R);(Same-  
,B&R);(lr-,B&R);(Opposite+,B&R);(Opposite,B&R);(Opposite-  
,B&R);(rl+,B&R);(rl,B&R);(rl-,B&R);(Same+,B&R);(Same,B&R);(Same-  
,B&R);(lr+,B&R);(Same-,B&R);(Same,B&R);(Same+,B&R);(rl-,B&R);

**Learnt Regular Grammar for Second Instance of Follow**

S -> X0  
X0 -> B0  
B0 -> (lr+,B&R) B1  
B1 -> (Same-,B&R) B2  
B2 -> (lr-,B&R) B3  
B3 -> (lr,B&R) B4  
B4 -> (lr+,B&R) B5  
B5 -> (Same-,B&R) B6  
B6 -> (lr-,B&R) B7  
B7 -> (Opposite+,B&R) B8  
B8 -> (Opposite,B&R) B9  
B9 -> (Opposite-,B&R) B10  
B10 -> (rl+,B&R) B11  
B11 -> (rl,B&R) B12  
B12 -> (rl-,B&R) B13  
B13 -> (rl,B&R) B14  
B14 -> (rl+,B&R) B15  
B15 -> (Opposite-,B&R) B16  
B16 -> (Opposite,B&R) B17  
B17 -> (Opposite+,B&R) B18  
B18 -> (Opposite,B&R) B19  
B19 -> (Opposite-,B&R) B20  
B20 -> (rl+,B&R) B21  
B21 -> (rl,B&R) B22  
B22 -> (rl-,B&R) B23  
B23 -> (Same+,B&R) B24  
B24 -> (rl-,B&R) B25  
B25 -> (rl,B&R) B26  
B26 -> (rl+,B&R) B27  
B27 -> (Opposite-,B&R) B28  
B28 -> (Opposite,B&R) B29  
B29 -> (Opposite+,B&R) B30  
B30 -> (lr-,B&R) B31  
B31 -> (lr,B&R) B32  
B32 -> (lr+,B&R) B33  
B33 -> (Same-,B&R) B34  
B34 -> (lr-,B&R) B35  
B35 -> (Opposite+,B&R) B36  
B36 -> (Opposite,B&R) B37  
B37 -> (Opposite-,B&R) B38  
B38 -> (rl+,B&R) B39  
B39 -> (rl,B&R) B40  
B40 -> (rl-,B&R) B41  
B41 -> (Same+,B&R) B42  
B42 -> (rl-,B&R) B43  
B43 -> (Same+,B&R) B44  
B44 -> (Same,B&R) B45  
B45 -> (Same-,B&R) B46  
B46 -> (lr-,B&R) B47  
B47 -> (lr,B&R) B48  
B48 -> (lr-,B&R) B49  
B49 -> (Opposite+,B&R) B50  
B50 -> (Opposite,B&R) B51

**Learnt Regular Grammar for Second Instance of Follow**

B51 -> (Opposite+,B&R) B52  
B52 -> (lr-,B&R) B53  
B53 -> (Opposite+,B&R) B54  
B54 -> (Opposite,B&R) B55  
B55 -> (Opposite-,B&R) B56  
B56 -> (rl+,B&R) B57  
B57 -> (rl,B&R) B58  
B58 -> (rl-,B&R) B59  
B59 -> (Same+,B&R) B60  
B60 -> (Same,B&R) B61  
B61 -> (Same-,B&R) B62  
B62 -> (lr-,B&R) B63  
B63 -> (Opposite+,B&R) B64  
B64 -> (Opposite,B&R) B65  
B65 -> (Opposite-,B&R) B66  
B66 -> (rl+,B&R) B67  
B67 -> ( rl,B&R) B68  
B68 -> ( rl-,B&R) B69  
B69 -> (Same+,B&R) B70  
B70 -> (Same,B&R) B71  
B71 -> (Same-,B&R) B72  
B72 -> (lr+,B&R) B73  
B73 -> (Same-,B&R) B74  
B74 -> (Same,B&R) B75  
B75 -> (Same+,B&R) B76  
B76 ->  $\epsilon$

**Grammar Productions after Both the Instances are Learned**

S -> X0  
X0 -> A0 | B0  
A0 -> (Same+,B) A1  
A1 -> (Same,B) A2  
A2 -> (Same-,B) A3  
A3 -> (Same,B) A4  
A4 -> (Same+,B) A5  
A5 -> (rl-,B) A6  
A6 -> (rl, B&L) A7  
A7 -> (rl+, B&L) A8  
A8 -> (Opposite-, B&L) A9  
A9 -> (Opposite, B&L) A10  
A10 -> (Opposite,B&L) A11  
A11 -> (Opposite-,B&L) A12  
A12 -> (rl+,B&L) A13  
A13 -> (rl,B&L) A14  
A14 -> (rl-,B&L) A15  
A15 -> (rl-, B&LO) A16  
A16 -> (rl-,B&LO) A17  
A17 -> (rl,B&LO) A18  
A18 -> (rl+,B&LO) A19  
A19 -> (rl,B&LO) A20  
A20 -> (rl-,B&LO) A21  
A21 -> (Same+,B&LO) A22  
A22 -> (rl-,B&LO) A23  
A23 -> (rl,B&LO) A24  
A24 -> (rl+,B&LO) A25  
A25 -> (Opposite-,B&LO) A26  
A26 -> (Opposite,B&LO) A27  
A27 -> (Opposite-,B&LO) A28  
A28 -> (rl+,B&LO) A29  
A29 -> (rl,B&LO) A30  
A30 -> (rl-,B&LO) A31  
A31 -> (Same+,B&LO) A32  
A32 -> (rl-,B&LO) A33  
A33 -> (rl,B&LO) A34  
A34 -> (rl+,B&LO) A35  
A35 -> (Opposite-,B&LO) A36  
A36 -> (Opposite,B&LO) A37  
A37 -> (Opposite+,B&LO) A38  
A38 -> (lr-,B&LO) A39  
A39 -> (lr,B&LO) A40  
A40 -> (lr+,B&LO) A41  
A41 -> (Same-,B&LO) A42  
A42 -> (lr-,B&LO) A43  
A43 -> (Opposite+,B&LO) A44  
A44 -> (Opposite, B&L) A45  
A45 -> (Opposite-, B&L) A46  
A46 -> (rl+, B&L) A47  
A47 -> (rl, B&L) A48  
A48 -> (rl-, B&L) A49  
A49 -> (rl-,B&L) A50  
A50 -> (rl, B&LO) A51

**Grammar Productions after Both the Instances are Learned**

A51 -> (rl+, B&LO) A52  
A52 -> (Opposite-, B&LO) A53  
A53 -> (Opposite, B&LO) A54  
A54 -> (Opposite,B&LO) A55  
A55 -> (Opposite-, B&L) A56  
A56 -> (Opposite-,B&L) A57  
A57 -> (rl+,B&L) A58  
A58 -> (rl,B&L) A59  
A59 -> (rl-,B&L) A60  
A60 -> (rl, B&LO) A61  
A61 -> (rl+, B&LO) A62  
A62 -> (Opposite-, B&LO) A63  
A63 -> (Opposite, B&LO) A64  
A64 -> (Opposite+, B&LO) A65  
A65 -> (Opposite+,B&LO) A66  
A66 -> (Opposite, B&L) A67  
A67 -> (Opposite-, B&L) A68  
A68 -> (rl+, B&L) A69  
A69 -> (rl, B&L) A70  
A70 -> (rl,B&L) A71  
A71 -> ( rl-, B&LO) A72  
A72 -> (Same+, B&LO) A73  
A73 -> (Same, B&LO) A74  
A74 -> (Same-, B&LO) A75  
A75 -> (lr+, B&LO) A76  
A76 -> (lr+,B&LO) A77  
A77 -> (Same-,B&LO) A78  
A78 -> (Same,B&LO) A79  
A79 -> (Same+,B&LO) A80  
A80 -> (rl-,B&LO) A81  
A81 -> (rl,B&LO) A82  
A82 -> (rl+,B&LO) A83  
A83 -> (Opposite-,B&LO) A84  
A84 -> (Opposite,B&LO) A85  
A85 -> (Opposite+,B&LO) A86  
A86 -> (Opposite, B&L) A87  
A87 -> (Opposite,B&L) A88  
A88 -> (Opposite+,B&L) A89  
A89 -> (Opposite,B&L) A90  
A90 -> (Opposite-,B&L) A91  
A91 -> (rl+,B&L) A92  
A92 -> (rl,B&L) A93  
A93 -> (rl-,B&L) A94  
A94 -> (Same+,B&L) A95  
A95 -> (rl-,B&L) A96  
A96 -> (rl,B&L) A97  
A97 -> (rl+,B&L) A98  
A98 -> (Opposite-,B&L) A99  
A99 -> (Opposite,B&L) A100  
A100 -> (Opposite-,B&L) A101

**Grammar Productions after Both the Instances are Learned**

A101 -> (rl+,B&L) A102  
A102 -> (rl,B&L) A103  
A103 -> (rl-,B&L) A104  
A104 -> (Same+,B&L) A105  
A105 -> (Same,B&L) A106  
A106 -> (Same-,B&L) A107  
A107 -> (lr+,B&L) A108  
A108 -> (Same-,B&L) A109  
A109 -> (Same,B&L) A110  
A110 -> (Same+,B&L) A111  
A111 -> (rl-,B&L) A112  
A112 -> (rl,B&L) A113  
A113 -> ( rl+,B&L) A114  
A114 -> (Opposite-,B&L) A115  
A115 -> (Opposite,B&L) A116  
A116 -> (Opposite+,B&L) A117  
A117 -> (lr-,B&L) A118  
A118 -> (lr,B&L) A119  
A119 -> (lr+,B&L) A120  
A120 -> (Same-,B&L) A121  
A121 -> (lr-,B&L) A122  
A122 -> (Opposite+,B&L) A123  
A123 ->  $\epsilon$

**Grammar Productions after Both the Instances are Learned**

B0 -> (lr+,B&R) B1  
B1 -> (Same-,B&R) B2  
B2 -> (lr-,B&R) B3  
B3 -> (lr,B&R) B4  
B4 -> (lr+,B&R) B5  
B5 -> (Same-,B&R) B6  
B6 -> (lr-,B&R) B7  
B7 -> (Opposite+,B&R) B8  
B8 -> (Opposite,B&R) B9  
B9 -> (Opposite-,B&R) B10  
B10 -> (rl+,B&R) B11  
B11 -> (rl,B&R) B12  
B12 -> (rl-,B&R) B13  
B13 -> (rl,B&R) B14  
B14 -> (rl+,B&R) B15  
B15 -> (Opposite-,B&R) B16  
B16 -> (Opposite,B&R) B17  
B17 -> (Opposite+,B&R) B18  
B18 -> (Opposite,B&R) B19  
B19 -> (Opposite-,B&R) B20  
B20 -> (rl+,B&R) B21  
B21 -> (rl,B&R) B22  
B22 -> (rl-,B&R) B23  
B23 -> (Same+,B&R) B24  
B24 -> (rl-,B&R) B25  
B25 -> (rl,B&R) B26  
B26 -> (rl+,B&R) B27  
B27 -> (Opposite-,B&R) B28  
B28 -> (Opposite,B&R) B29  
B29 -> (Opposite+,B&R) B30  
B30 -> (lr-,B&R) B31  
B31 -> (lr,B&R) B32  
B32 -> (lr+,B&R) B33  
B33 -> (Same-,B&R) B34  
B34 -> (lr-,B&R) B35  
B35 -> (Opposite+,B&R) B36  
B36 -> (Opposite,B&R) B37  
B37 -> (Opposite-,B&R) B38  
B38 -> (rl+,B&R) B39  
B39 -> (rl,B&R) B40  
B40 -> (rl-,B&R) B41  
B41 -> (Same+,B&R) B42  
B42 -> (rl-,B&R) B43  
B43 -> (Same+,B&R) B44  
B44 -> (Same,B&R) B45  
B45 -> (Same-,B&R) B46  
B46 -> (lr-,B&R) B47  
B47 -> (lr,B&R) B48  
B48 -> (lr-,B&R) B49  
B49 -> (Opposite+,B&R) B50  
B50 -> (Opposite,B&R) B51

**Grammar Productions after Both the Instances are Learned**

B51 -> (Opposite+,B&R) B52  
B52 -> (lr-,B&R) B53  
B53 -> (Opposite+,B&R) B54  
B54 -> (Opposite,B&R) B55  
B55 -> (Opposite-,B&R) B56  
B56 -> (rl+,B&R) B57  
B57 -> (rl,B&R) B58  
B58 -> (rl-,B&R) B59  
B59 -> (Same+,B&R) B60  
B60 -> (Same,B&R) B61  
B61 -> (Same-,B&R) B62  
B62 -> (lr-,B&R) B63  
B63 -> (Opposite+,B&R) B64  
B64 -> (Opposite,B&R) B65  
B65 -> (Opposite-,B&R) B66  
B66 -> (rl+,B&R) B67  
B67 -> ( rl,B&R) B68  
B68 -> ( rl-,B&R) B69  
B69 -> (Same+,B&R) B70  
B70 -> (Same,B&R) B71  
B71 -> (Same-,B&R) B72  
B72 -> (lr+,B&R) B73  
B73 -> (Same-,B&R) B74  
B74 -> (Same,B&R) B75  
B75 -> (Same+,B&R) B76  
B76 ->  $\epsilon$



## Appendix B

# Motion Pattern Recognition in GIS Domain

## Appendix B

### RESULTS OF GIS MOTION PATTERN RECOGNITION

#### 1) Motion Patterns Observed

<b>Route</b>	<b>Observed Motion Pattern</b>
ROUTE 1	Concurrence
ROUTE 2	Moving Cluster
ROUTE 3	Moving Cluster
ROUTE 4	Propagation
ROUTE 5	Moving Cluster
ROUTE 6	Moving Cluster
ROUTE 7	Trend-Setting
ROUTE 8	Propagation
ROUTE 9	Concurrence
ROUTE 10	Concurrence
ROUTE 11	Moving Cluster
ROUTE 12	Moving Cluster
ROUTE 13	Moving Cluster
ROUTE 14	Concurrence
ROUTES 1,10,12	Opposition
ROUTE 2,3	Repetition

Figure B.1: Recognised Patterns

## 2) UTM Coordinates for Different Routes

### ROUTE 1

Object	Easting	Northing
1	614686	2957776
2	614685	2957772
3	614690	2957771
4	614687	2957773
5	614686	2957774
1	615155	2958181
2	615152	2958180
3	615153	2958181
4	615150	2958179
5	615151	2958177
1	615986	2958815
2	615979	2958814
3	615987	2958817
4	615980	2958820
5	615981	2958815
1	616863	2959146
2	616869	2959151
3	616869	2959152
4	616862	2959143
5	616861	2959149
1	475291	2958937
2	475298	2958941
3	475292	2958939
4	475299	2958942
5	475300	2958946
1	618745	2959842
2	618744	2959842
3	618752	2959835
4	618752	2959834
5	618745	2959841

Figure B.2: UTM Coordinates for Route 1

**ROUTE 2**

Object	Easting	Northing
1	622925	2962218
2	622918	2962219
3	622924	2962212
4	622923	2962213
5	622919	2962222
1	622032	2962521
2	622032	2962519
3	622035	2962523
4	622036	2962517
5	622031	2962514
1	621064	2962817
2	621063	2962816
3	621062	2962820
4	621068	2962818
5	621069	2962817
1	620153	2962789
2	620151	2962788
3	620148	2962792
4	620149	2962791
5	620150	2962790

Figure B.3: UTM Coordinates for Route 2

**ROUTE 3**

Object	Easting	Northing
1	624099	2961901
2	624095	2961896
3	624101	2961900
4	624097	2961901
5	624101	2961894
1	623134	2962141
2	623131	2962143
3	623133	2962139
4	623130	2962144
5	623134	2962141
1	622356	2962418
2	622350	2962420
3	622356	2962420
4	622354	2962425
5	622355	2962422
1	620420	2962899
2	620419	2962899
3	620421	2962904
4	620421	2962903
5	620424	2962903
1	619436	2962691
2	619432	2962691
3	619432	2962691
4	619432	2962691
5	619432	2962691
1	618730	2962103
2	618729	2962098
3	618729	2962095
4	618726	2962104
5	618727	2962101
1	618097	2961369
2	618098	2961375
3	618092	2961371
4	618097	2961372
5	618099	2961372
1	617817	2960410
2	617816	2960406
3	617821	2960409
4	617817	2960409
5	617816	2960408
1	617562	2959451
2	617558	2959454
3	617560	2959451
4	617557	2959453
5	617559	2959450

Figure B.4: UTM Coordinates for Route 3

**ROUTE 4**

Object	Easting	Northing
1	620473	2960493
2	620469	2960496
3	620469	2960501
4	620475	2960500
5	620474	2960498
1	621382	2960821
2	621384	2960818
3	621385	2960815
4	621384	2960815
5	621383	2960813
1	622269	2961159
2	622267	2961155
3	622266	2961162
4	622262	2961156
5	622263	2961156
1	623236	2961521
2	623234	2961522
3	623234	2961522
4	623239	2961526
5	623236	2961527
1	624099	2961901
2	624097	2961895
3	624098	2961898
4	624098	2961900
5	624096	2961900

Figure B.5: UTM Coordinates for Route 4

**ROUTE 5**

Object	Easting	Northing
1	619147	2959999
2	619146	2960000
3	619149	2960000
4	619142	2959996
5	619145	2960002
1	619714	2960261
2	619718	2960258
3	619717	2960258
4	619721	2960262
5	619721	2960256
1	619798	2959585
2	619794	2959583
3	619797	2959586
4	619795	2959584
5	619793	2959583
1	619441	2958699
2	619444	2958700
3	619447	2958693
4	619443	2958698
5	619442	2958696
1	619094	2957792
2	619093	2957796
3	619098	2957794
4	619098	2957798
5	619097	2957797
1	618561	2956919
2	618560	2956920
3	618562	2956927
4	618556	2956924
5	618558	2956923
1	617932	2956274
2	617936	2956275
3	617933	2956279
4	617939	2956274
5	617934	2956277

Figure B.6: UTM Coordinates for Route 5

**ROUTE 6**

Object	Easting	Northing
1	617932	2956274
2	617936	2956276
3	617931	2956279
4	617938	2956273
5	617937	2956276
1	618646	2957013
2	618645	2957012
3	618643	2957008
4	618642	2957017
5	618645	2957015
1	619104	2957821
2	619101	2957826
3	619108	2957828
4	619107	2957823
5	619105	2957830
1	619451	2958788
2	619454	2958794
3	619451	2958794
4	619452	2958791
5	619457	2958790
1	619862	2959640
2	619863	2959639
3	619864	2959643
4	619865	2959641
5	619864	2959638
1	619638	2960187
2	619641	2960186
3	619641	2960190
4	619636	2960196
5	619639	2960195
1	619520	2960134
2	619523	2960132
3	619520	2960136
4	619521	2960132
5	619519	2960132

Figure B.7: UTM Coordinates for Route 6



**ROUTE 7**

Object	Easting	Northing
1	623655	2959238
2	623653	2959231
3	623652	2959231
4	623658	2959237
5	623658	2959235
1	623729	2959554
2	623730	2959553
3	623728	2959555
4	623733	2959555
5	623733	2959554
1	623716	2959772
2	623711	2959771
3	623715	2959777
4	623714	2959777
5	623712	2959778
1	623625	2960808
2	623622	2960806
3	623622	2960806
4	623623	2960810
5	623623	2960804
1	623507	2961597
2	623503	2961601
3	623503	2961605
4	623508	2961605
5	623508	2961598

1	622058	2961064
2	622054	2961068
3	622054	2961068
4	622057	2961067
5	622060	2961071
1	621179	2960735
2	621175	2960734
3	621176	2960734
4	621178	2960732
5	621174	2960739
1	620624	2960562
2	620621	2960563
3	620621	2960563
4	620624	2960568
5	620624	2960567
1	619863	2960311
2	619871	2960313
3	619868	2960319
4	619870	2960315
5	619869	2960315

Figure B.8: UTM Coordinates for Route 7

**ROUTE 8**

Object	Easting	Northing
1	618911	2956465
2	618909	2956461
3	618910	2956464
4	618913	2956463
5	618913	2956466
1	619031	2956365
2	619027	2956359
3	619027	2956367
4	619031	2956366
5	619031	2956362
1	618799	2956807
2	618795	2956804
3	618798	2956804
4	618801	2956803
5	618800	2956808
1	619174	2957945
2	619171	2957944
3	619177	2957948
4	619173	2957948
5	619178	2957953
1	619390	2958538
2	619385	2958534
3	619389	2958541
4	619390	2958539
5	619390	2958538
1	619928	2959685
2	619929	2959681
3	619923	2959684
4	619934	2959686
5	619936	2959684
1	619813	2960246
2	619814	2960252
3	619822	2960245
4	619810	2960253
5	619819	2960248
1	619823	2960334
2	619830	2960340
3	619829	2960329
4	619822	2960338
5	619828	2960334

Figure B.9: UTM Coordinates for Route 8

**ROUTE 9**

Object	Easting	Northing
1	623396	2959299
2	623395	2959299
3	623395	2959299
4	623396	2959298
5	623395	2959299
1	622614	2959574
2	622614	2959574
3	622613	2959573
4	622614	2959574
5	622614	2959573
1	621302	2959623
2	621304	2959623
3	621309	2959623
4	621298	2959623
5	621306	2959623
1	621640	2959069
2	621643	2959067
3	621634	2959067
4	621638	2959066
5	621634	2959064
1	621839	2958219
2	621835	2958213
3	621841	2958212
4	621836	2958221
5	621836	2958223
1	621084	2958561
2	621091	2958560
3	621091	2958570
4	621088	2958567
5	621089	2958559

1	620624	2958792
2	620629	2958796
3	620627	2958793
4	620632	2958787
5	620632	2958794
1	620507	2959624
2	620514	2959627
3	620511	2959623
4	620512	2959624
5	620514	2959622
1	620213	2959700
2	620214	2959693
3	620211	2959697
4	620210	2959702
5	620207	2959703
1	619966	2959670
2	619965	2959666
3	619960	2959668

4	619966	2959675
5	619967	2959678
1	619900	2959902
2	619892	2959904
3	619896	2959899
4	619900	2959900
5	619899	2959904
1	619856	2960132
2	619854	2960126
3	619851	2960125
4	619862	2960131
5	619857	2960126
1	619829	2960299
2	619824	2960306
3	619832	2960302
4	619825	2960296
5	619832	2960299

Figure B.10: UTM Coordinates for Route 9

ROUTE 10

Object	Easting	Northing
1	621233	2961024
2	621232	2961024
3	621228	2961024
4	621230	2961024
5	621233	2961024
1	621063	2961260
2	621060	2961255
3	621057	2961261
4	621064	2961256
5	621063	2961262
1	621064	2961530
2	621059	2961530
3	621065	2961531
4	621073	2961530
5	621066	2961531
1	621097	2962128
2	621103	2962131
3	621106	2962134
4	621095	2962137
5	621089	2962125
1	621097	2962784
2	621105	2962770
3	621101	2962787
4	621095	2962791
5	621097	2962782

1	620735	2962885
2	620740	2962880
3	620740	2962880
4	620742	2962873
5	620728	2962881
1	620305	2962863
2	620298	2962875
3	620304	2962872
4	620298	2962881
5	620296	2962863
1	619595	2962717
2	619605	2962713
3	619607	2962713
4	619599	2962711
5	619598	2962709
1	618945	2962292
2	618938	2962284
3	618940	2962294
4	618939	2962288
5	618946	2962284
1	618547	2961960
2	618552	2961966
3	618546	2961963

4	618544	2961970
5	618547	2961960
1	618174	2961568
2	618170	2961565
3	618172	2961570
4	618176	2961577
5	618169	2961570
1	618514	2961390
2	618519	2961386
3	618512	2961392
4	618520	2961386
5	618517	2961385
1	619079	2961127
2	619082	2961129
3	619078	2961132
4	619079	2961123
5	619083	2961128
1	619704	2960912
2	619706	2960905
3	619706	2960907
4	619700	2960908
5	619704	2960917
1	619772	2960647
2	619768	2960653
3	619777	2960652
4	619772	2960648

5	619774	2960647
1	619828	2960350
2	619821	2960352
3	619826	2960345
4	619825	2960353
5	619825	2960344

Figure B.11: UTM Coordinates for Route 10

**ROUTE 11**

Object	Easting	Northing
1	619863	2960311
2	619866	2960317
3	619870	2960316
4	619866	2960314
5	619870	2960320
1	620624	2960562
2	620619	2960565
3	620623	2960570
4	620618	2960563
5	620618	2960568
1	621179	2960735
2	621172	2960740
3	621177	2960734
4	621175	2960732
5	621180	2960741
1	622058	2961064
2	622055	2961069
3	622055	2961068
4	622061	2961068
5	622061	2961063
1	623507	2961597
2	623503	2961604
3	623503	2961596
4	623509	2961604
5	623508	2961600
1	623625	2960808
2	623624	2960802
3	623623	2960802
4	623623	2960810
5	623618	2960809
1	623716	2959772
2	623710	2959771
3	623710	2959779
4	623715	2959769
5	623703	2959773
1	623729	2959554
2	623731	2959552
3	623737	2959552
4	623732	2959556
5	623736	2959554
1	623655	2959204
2	623654	2959200
3	623653	2959200
4	623661	2959203
5	623660	2959198

Figure B.12: UTM Coordinates for Route 11

**ROUTE 12**

Object	Easting	Northing
1	619823	2960334
2	619824	2960340
3	619822	2960338
4	619828	2960337
5	619828	2960342
1	619813	2960246
2	619818	2960244
3	619824	2960252
4	619821	2960243
5	619817	2960246
1	619928	2959685
2	619929	2959681
3	619935	2959688
4	619926	2959687
5	619929	2959684
1	619390	2958538
2	619386	2958536
3	619385	2958543
4	619391	2958542
5	619390	2958539
1	619174	2957945
2	619170	2957951
3	619177	2957941
4	619177	2957951
5	619176	2957948
1	618799	2956807
2	618798	2956804
3	618798	2956803
4	618791	2956803
5	618796	2956799
1	619031	2956365
2	619030	2956362
3	619026	2956361
4	619033	2956366
5	619032	2956367
1	618911	2956465
2	618907	2956460
3	618912	2956466
4	618912	2956465
5	618908	2956460

Figure B.13: UTM Coordinates for Route 12

**ROUTE 13**

Object	Easting	Northing
1	619832	2960299
2	619831	2960305
3	619827	2960296
4	619828	2960303
5	619828	2960306
1	619856	2960132
2	619857	2960131
3	619863	2960129
4	619862	2960122
5	619858	2960125
1	619900	2959902
2	619899	2959900
3	619898	2959897
4	619904	2959904
5	619903	2959909
1	619966	2959670
2	619964	2959668
3	619964	2959676
4	619961	2959675
5	619966	2959672
1	620213	2959700
2	620211	2959695
3	620216	2959695
4	620215	2959701
5	620210	2959693
1	620507	2959624
2	620506	2959622
3	620504	2959622
4	620511	2959627
5	620510	2959627
1	620624	2958792
2	620627	2958791
3	620630	2958796
4	620629	2958789
5	620629	2958793
1	621084	2958561
2	621089	2958560
3	621088	2958566
4	621088	2958566
5	621092	2958569
1	621839	2958219
2	621835	2958216
3	621840	2958215
4	621839	2958215
5	621836	2958213

1	621640	2959069
2	621639	2959066
3	621635	2959066
4	621637	2959072
5	621634	2959071
1	621302	2959622
2	621301	2959619
3	621307	2959624
4	621306	2959623
5	621304	2959624
1	622614	2959573
2	622612	2959572
3	622616	2959574
4	622610	2959574
5	622609	2959580
1	623395	2959298
2	623398	2959295
3	623398	2959295
4	623400	2959292
5	623400	2959293

Figure B.14: UTM Coordinates for Route 13

ROUTE 14

Object	Easting	Northing
1	619828	2960350
2	619826	2960351
3	619824	2960351
4	619822	2960345
5	619824	2960343
1	619772	2960647
2	619776	2960643
3	619778	2960650
4	619773	2960649
5	619778	2960650
1	619704	2960912
2	619702	2960910
3	619701	2960916
4	619705	2960912
5	619705	2960912
1	619083	2961127
2	619086	2961128
3	619079	2961122
4	619083	2961126
5	619087	2961131
1	618514	2961390
2	618511	2961383
3	618519	2961387
4	618514	2961392
5	618516	2961391
1	618174	2961568
2	618176	2961576
3	618177	2961566
4	618179	2961570
5	618172	2961568
1	618547	2961960
2	618545	2961966
3	618544	2961966
4	618542	2961969
5	618547	2961962

1	618945	2962292
2	618940	2962294
3	618946	2962288
4	618948	2962292
5	618947	2962285
1	619595	2962717
2	619593	2962715
3	619597	2962711
4	619600	2962710
5	619594	2962715
1	620305	2962863
2	620300	2962864
3	620297	2962870
4	620303	2962873
5	620302	2962872
1	620735	2962885
2	620733	2962883
3	620730	2962885
4	620736	2962883
5	620738	2962887
1	621097	2962784
2	621095	2962781
3	621100	2962788
4	621099	2962787
5	621096	2962790

1	621097	2962128
2	621095	2962131
3	621094	2962135
4	621090	2962134
5	621088	2962129
1	621064	2961530
2	621068	2961535
3	621072	2961539
4	621067	2961533
5	621068	2961527
1	621063	2961260
2	621058	2961259
3	621059	2961258
4	621057	2961262
5	621055	2961261
1	621233	2961023
2	621234	2961021
3	621233	2961028
4	621228	2961026
5	621231	2961023

Figure B.15: UTM Coordinates for Route 14



**TEMPORAL CHARACTERISTICS FOR ROUTE 1**

Route	Object	Start Time	Finish Time	Performed On
1	A,B,C,D,E	4:10 p.m.	4.36 p.m.	Day 1

**TEMPORAL CHARACTERISTICS FOR ROUTE 2**

Route	Object	Start Time	Finish Time	Performed On
2	A,B,C,D,E	6:15 p.m.	6:50 p.m.	Day 2

**TEMPORAL CHARACTERISTICS FOR ROUTE 3**

Route	Object	Start Time	Finish Time	Performed On
3	A,B,C,D,E	5:10 p.m.	5.36 p.m.	Day 3

**TEMPORAL CHARACTERISTICS FOR ROUTE 4**

Route	Object	Start Time	Finish Time	Performed On
4	A	3:15 p.m.	3:26 p.m.	Day 4
4	B	3:50 p.m.	4:03 p.m.	Day 4
4	C	4:15 p.m.	4:31 p.m.	Day4
4	D	4:38 p.m.	4:58 p.m.	Day 5
4	E	5:10 p.m.	5:26 p.m.	Day 5

**TEMPORAL CHARACTERISTICS FOR ROUTE 5**

Route	Object	Start Time	Finish Time	Performed On
5	A,B,C,D,E	10:15 a.m.	10:38 a.m.	Day 6

Figure B.16: Temporal Characteristics of Routes

**TEMPORAL CHARACTERISTICS FOR ROUTE 6**

Route	Object	Start Time	Finish Time	Performed On
6	A,B,C,D,E	10:45 a.m.	11:05 a.m.	Day 6

**TEMPORAL CHARACTERISTICS FOR ROUTE 7**

Route	Object	Start Time	Finish Time	Performed On
7	A	3:05 p.m.	3:22 p.m.	Day 7
7	B,C	4:10 p.m.	4:29 p.m.	Day 7
7	D	4:50 p.m.	5:18 p.m.	Day 7
7	E	5:10 p.m.	5:36 p.m.	Day 7

**TEMPORAL CHARACTERISTICS FOR ROUTE 8**

Route	Object	Start Time	Finish Time	Performed On
8	A	2:25 p.m.	2:42 p.m.	Day 8
8	B	3:35 p.m.	3:55 p.m.	Day 8
8	C	7:12 a.m.	7:24 a.m.	Day 8
8	E	4:23 p.m.	4:48 p.m.	Day 8

**TEMPORAL CHARACTERISTICS FOR ROUTE 9**

Route	Object	Start Time	Finish Time	Performed On
9	A,B,C,D,E	5:30 p.m.	6:05 p.m.	Day 9

Figure B.17: Temporal Characteristics of Routes

**TEMPORAL CHARACTERISTICS FOR ROUTE 10**

Route	Object	Start Time	Finish Time	Performed On
10	A,B,C	4:36 p.m.	4:56 p.m.	Day 1

**TEMPORAL CHARACTERISTICS FOR ROUTE 11**

Route	Object	Start Time	Finish Time	Performed On
11	A,B,C,D,E	5:40 p.m.	6:25 p.m.	Day 7

**TEMPORAL CHARACTERISTICS ROUTE 12**

Route	Object	Start Time	Finish Time	Performed On
12	D,E	4:36 p.m.	5:05 p.m.	Day 1

**TEMPORAL CHARACTERISTICS FOR ROUTE 13**

Route	Object	Start Time	Finish Time	Performed On
13	A,B,C,D,E	2:30 p.m.	2:55 p.m.	Day 9

**TEMPORAL CHARACTERISTICS FOR ROUTE 14**

Route	Object	Start Time	Finish Time	Performed On
14	A,B,C,D,E	5:10 p.m.	5:27 p.m.	Day 1

Figure B.18: Temporal Characteristics of Routes

**3. Computed Motion Patterns for Different Reference Selections**  
(for all routes)

**ROUTE 1**

Combination One:

Begin

Event=GISEvent

Object A:

(veryclose,NE);(close,NE);(close,N);(close,NW);(close,W);(veryclose,NW);  
(veryclose,N);(veryclose,NE);(veryclose,E);

End

Combination One:

Begin

Event=GISEvent

Object B:

(veryclose,NE);(close,NE);(veryclose,N);(veryclose,NW);(veryclose,W);  
(close,NW);(close,N);(close,NE);(close,E);

End

Combination One:

Begin

Event=GISEvent

Object C:

(close,NE);(veryclose,NE);(close,N);(close,NW);(close,W);(near,NW);  
(near,N);(near,NE);(near,E);

End

Combination One:

Begin

Event=GISEvent

Object D:

(close,NE);(veryclose,NE);(close,N);(close,NW);(close,W);(near,NW);  
(near,N);(near,NE);(near,E);

End

Combination Two:

Begin

Event=GISEvent

Object A:

(veryclose,NE);(close,NE);(close,N);(close,NW);(close,W);(veryclose,NW);

(veryclose,N);(veryclose,NE);(veryclose,E);

End

Combination Two:

Begin

Event=GISEvent

Object B:

(veryclose,NE);(close,NE);(veryclose,NE);(close,N);(close,NW);(close,W);

(near,NW);(near,N);(near,NE);(near,E);

End

Combination Two:

Begin

Event=GISEvent

Object C:

(veryclose,NE);(close,NE);(near,NE);(close,N);(veryclose,NW);

(veryclose,W);(close,NW);(near,N);(near,NE);(near,E);

End

Combination Two:

Begin

Event=GISEvent

Object D:

(veryclose,NE);(close,NE);(near,NE);(close,N);(veryclose,NW);

(veryclose,W);(close,NW);(near,N);(near,NE);(near,E);

End

Combination Three:

Begin

Event=GISEvent

Object A:

(veryclose,NE);(close,NE);(veryclose,N);(veryclose,NW);(veryclose,W);  
(close,NW);(close,N);(close,NE);(close,E);

End

Combination Three:

Begin

Event=GISEvent

Object B:

(veryclose,NE);(close,NE);(veryclose,NE);(close,N);(close,NW);  
(close,W);(near,NW);(near,N);(near,NE);(near,E);

End

Combination Three:

Begin

Event=GISEvent

Object C:

(veryclose,NE);(close,NE);(near,NE);(close,N);(close,NW);(close,W);  
(veryclose,NW);(veryclose,N);(veryclose,NE);(veryclose,E);

End

Combination Three:

Begin

Event=GISEvent

Object D:

(veryclose,NE);(close,NE);(near,NE);(close,N);(close,NW);(close,W);  
(veryclose,NW);(veryclose,N);(veryclose,NE);(veryclose,E);

End

Combination Four:

Begin

Event=GISEvent

Object A:

(close,NE);(veryclose,NE);(close,N);(close,NW);(close,W);(near,NW);  
(near,N);(near,NE);(near,E);

End

Combination Four:

```
Begin
Event=GISEvent
Object B:
(veryclose,NE);(close,NE);(near,NE);(close,N);(veryclose,NW);
(veryclose,W);(close,NW);(near,N);(near,NE);(near,E);
End
Combination Four:
Begin
Event=GISEvent
Object C:
(veryclose,NE);(close,NE);(near,NE);(close,N);(close,NW);(close,W);
(veryclose,NW);(veryclose,N);(veryclose,NE);(veryclose,E);
End
Combination Four:
Begin
Event=GISEvent
Object D:
(veryclose,NE);(close,NE);(near,NE);(close,N);(close,NW);(close,W);
(veryclose,NW);(veryclose,N);(veryclose,NE);(veryclose,E);
End
Combination Five:
Begin
Event=GISEvent
Object A:
(close,NE);(veryclose,NE);(close,N);(close,NW);(close,W);(near,NW);
(near,N);(near,NE);(near,E);
End
Combination Five:
Begin
Event=GISEvent
Object B:
(veryclose,NE);(close,NE);(near,NE);(close,N);(veryclose,NW);
```

(veryclose,W);(close,NW);(near,N);(near,NE);(near,E);

End

Combination Five:

Begin

Event=GISEvent

Object C:

(veryclose,NE);(close,NE);(near,NE);(close,N);(close,NW);(close,W);

(veryclose,NW);(veryclose,N);(veryclose,NE);(veryclose,E);

End

Combination Five:

Begin

Event=GISEvent

Object D:

(veryclose,NE);(close,NE);(near,NE);(close,N);(close,NW);(close,W);

(veryclose,NW);(veryclose,N);(veryclose,NE);(veryclose,E);

End

## **ROUTE 2**

Combination One:

Begin

Event=GISEvent

Object A:

(veryclose,NW);(veryclose,W);(veryclose,SW);(close,SW);

(veryclose,SW);(close,SW);

End

Combination One:

Begin

Event=GISEvent

Object B:

(veryclose,NW);(close,W);(close,SW);(veryclose,SW);(close,SW);

(veryclose,SW);

End

Combination One:

Begin

Event=GISEvent

Object C:

(close,NW);(veryclose,NW);(veryclose,W);(veryclose,SW);(close,SW);

End

Combination One:

Begin

Event=GISEvent

Object D:

(close,NW);(veryclose,NW);(veryclose,W);(veryclose,SW);(close,SW);

End

Combination Two:

Begin

Event=GISEvent

Object A:

(veryclose,NW);(veryclose,W);(veryclose,SW);(close,SW);(veryclose,SW);

(close,SW);

End

Combination Two:

Begin

Event=GISEvent

Object B:

(veryclose,NW);(veryclose,W);(veryclose,SW);(close,SW);(veryclose,SW);

End

Combination Two:

Begin

Event=GISEvent

Object C:

(veryclose,NW);(close,NW);(veryclose,W);(veryclose,SW);(close,SW);

(veryclose,SW);

End



Combination Two:

Begin

Event=GISEvent

Object D:

(veryclose,NW);(close,NW);(veryclose,W);(veryclose,SW);(close,SW);  
(veryclose,SW);

End

Combination Three:

Begin

Event=GISEvent

Object A:

(veryclose,NW);(close,W);(close,SW);(veryclose,SW);(close,SW);  
(veryclose,SW);

End

Combination Three:

Begin

Event=GISEvent

Object B:

(veryclose,NW);(veryclose,W);(veryclose,SW);(close,SW);  
(veryclose,SW);

End

Combination Three:

Begin

Event=GISEvent

Object C:

(close,NW);(veryclose,W);(veryclose,SW);(close,SW);  
(veryclose,SW);

End

Combination Three:

Begin

Event=GISEvent

Object D:

```
(close,NW);(veryclose,W);(veryclose,SW);(close,SW);(veryclose,SW);  
End
```

Combination Four:

```
Begin
```

```
Event=GISEvent
```

```
Object A:
```

```
(close,NW);(veryclose,NW);(veryclose,W);(veryclose,SW);(close,SW);  
End
```

Combination Four:

```
Begin
```

```
Event=GISEvent
```

```
Object B:
```

```
(veryclose,NW);(close,NW);(veryclose,W);(veryclose,SW);(close,SW);  
(veryclose,SW);  
End
```

End

Combination Four:

```
Begin
```

```
Event=GISEvent
```

```
Object C:
```

```
(close,NW);(veryclose,W);(veryclose,SW);(close,SW);(veryclose,SW);  
End
```

Combination Four:

```
Begin
```

```
Event=GISEvent
```

```
Object D:
```

```
(close,NW);(veryclose,W);(veryclose,SW);(close,SW);(veryclose,SW);  
End
```

Combination Five:

```
Begin
```

```
Event=GISEvent
```

```
Object A:
```

```
(close,NW);(veryclose,NW);(veryclose,W);(veryclose,SW);(close,SW);
```

End

Combination Five:

Begin

Event=GISEvent

Object B:

(veryclose,NW);(close,NW);(veryclose,W);(veryclose,SW);(close,SW);  
(veryclose,SW);

End

Combination Five:

Begin

Event=GISEvent

Object C:

(close,NW);(veryclose,W);(veryclose,SW);(close,SW);(veryclose,SW);

End

Combination Five:

Begin

Event=GISEvent

Object D:

(close,NW);(veryclose,W);(veryclose,SW);(close,SW);(veryclose,SW);

End

### **ROUTE 3**

Combination One:

Begin

Event=GISEvent

Object A:

(veryclose,NW);(close,NW);(veryclose,NW);(veryclose,W);(veryclose,SW);  
(close,SW);(veryclose,SW);

End

Combination One:

Begin

Event=GISEvent

Object B:

(veryclose,NW);(close,NW);(veryclose,W);(veryclose,SW);(close,SW);  
(veryclose,SW);

End

Combination One:

Begin

Event=GISEvent

Object C:

(veryclose,NW);(close,NW);(veryclose,NW);(veryclose,W);(veryclose,SW);  
(close,SW);

End

Combination One:

Begin

Event=GISEvent

Object D:

(veryclose,NW);(close,NW);(veryclose,NW);(veryclose,W);(veryclose,SW);  
(close,SW);

End

Combination Two:

Begin

Event=GISEvent

Object A:

(veryclose,NW);(close,NW);(veryclose,NW);(veryclose,W);(veryclose,SW);  
(close,SW);(veryclose,SW);

End

Combination Two:

Begin

Event=GISEvent

Object B:

(veryclose,NW);(close,NW);(veryclose,W);(veryclose,SW);(close,SW);  
(veryclose,SW);

End

Combination Two:

Begin

Event=GISEvent

Object C:

(veryclose,NW);(close,NW);(veryclose,NW);(veryclose,W);(veryclose,SW);  
(close,SW);(veryclose,SW);

End

Combination Two:

Begin

Event=GISEvent

Object D:

(veryclose,NW);(close,NW);(veryclose,NW);(veryclose,W);(veryclose,SW);  
(close,SW);(veryclose,SW);

End

Combination Three:

Begin

Event=GISEvent

Object A:

(veryclose,NW);(close,NW);(veryclose,W);(veryclose,SW);(close,SW);  
(veryclose,SW);

End

Combination Three:

Begin

Event=GISEvent

Object B:

(veryclose,NW);(close,NW);(veryclose,W);(veryclose,SW);(close,SW);  
(veryclose,SW);

End

Combination Three:

Begin

Event=GISEvent

Object C:

(close,NW);(veryclose,NW);(veryclose,W);(veryclose,SW);(close,SW);  
(veryclose,SW);

End

Combination Three:

Begin

Event=GISEvent

Object D:

(close,NW);(veryclose,NW);(veryclose,W);(veryclose,SW);(close,SW);  
(veryclose,SW);

End

Combination Four:

Begin

Event=GISEvent

Object A:

(veryclose,NW);(close,NW);(veryclose,NW);(veryclose,W);(veryclose,SW);  
(close,SW);

End

Combination Four:

Begin

Event=GISEvent

Object B:

(veryclose,NW);(close,NW);(veryclose,NW);(veryclose,W);(veryclose,SW);  
(close,SW);(veryclose,SW);

End

Combination Four:

Begin

Event=GISEvent

Object C:

(close,NW);(veryclose,NW);(veryclose,W);(veryclose,SW);(close,SW);  
(veryclose,SW);

End

Combination Four:

```
Begin
Event=GISEvent
Object D:
(close,NW);(veryclose,NW);(veryclose,W);(veryclose,SW);(close,SW);
(veryclose,SW);
End
Combination Five:
Begin
Event=GISEvent
Object A:
(veryclose,NW);(close,NW);(veryclose,NW);(veryclose,W);
(veryclose,SW);(close,SW);
End
Combination Five:
Begin
Event=GISEvent
Object B:
(veryclose,NW);(close,NW);(veryclose,NW);(veryclose,W);
(veryclose,SW);(close,SW);(veryclose,SW);
End
Combination Five:
Begin
Event=GISEvent
Object C:
(close,NW);(veryclose,NW);(veryclose,W);(veryclose,SW);
(close,SW);(veryclose,SW);
End
Combination Five:
Begin
Event=GISEvent
Object D:
(close,NW);(veryclose,NW);(veryclose,W);(veryclose,SW);
```

```
(close,SW);(veryclose,SW);  
End
```

#### **ROUTE 4**

Combination One:

```
Begin  
Event=GISEvent  
Object A:  
(veryclose,NE);(close,NE);  
End
```

Combination One:

```
Begin  
Event=GISEvent  
Object B:  
(close,NE);(veryclose,NE);  
End
```

Combination One:

```
Begin  
Event=GISEvent  
Object C:  
(close,NE);(veryclose,NE);  
End
```

Combination One:

```
Begin  
Event=GISEvent  
Object D:  
(close,NE);(veryclose,NE);  
End
```

Combination Two:

```
Begin  
Event=GISEvent  
Object A:
```



```
(veryclose,NE);(close,NE);  
End  
Combination Two:  
Begin  
Event=GISEvent  
Object B:  
(veryclose,NE);(close,NE);(veryclose,NE);  
End  
Combination Two:  
Begin  
Event=GISEvent  
Object C:  
(veryclose,NE);(close,NE);  
End  
Combination Two:  
Begin  
Event=GISEvent  
Object D:  
(veryclose,NE);(close,NE);  
End  
Combination Three:  
Begin  
Event=GISEvent  
Object A:  
(close,NE);(veryclose,NE);  
End  
Combination Three:  
Begin  
Event=GISEvent  
Object B:  
(veryclose,NE);(close,NE);(veryclose,NE);  
End
```

Combination Three:

Begin

Event=GISEvent

Object C:

(veryclose,NE);(close,NE);(veryclose,NE);

End

Combination Three:

Begin

Event=GISEvent

Object D:

(veryclose,NE);(close,NE);(veryclose,NE);

End

Combination Four:

Begin

Event=GISEvent

Object A:

(close,NE);(veryclose,NE);

End

Combination Four:

Begin

Event=GISEvent

Object B:

(veryclose,NE);(close,NE);

End

Combination Four:

Begin

Event=GISEvent

Object C:

(veryclose,NE);(close,NE);(veryclose,NE);

End

Combination Four:

Begin

Event=GISEvent

Object D:

(veryclose,NE);(close,NE);(veryclose,NE);

End

Combination Five:

Begin

Event=GISEvent

Object A:

(close,NE);(veryclose,NE);

End

Combination Five:

Begin

Event=GISEvent

Object B:

(veryclose,NE);(close,NE);

End

Combination Five:

Begin

Event=GISEvent

Object C:

(veryclose,NE);(close,NE);(veryclose,NE);

End

Combination Five:

Begin

Event=GISEvent

Object D:

(veryclose,NE);(close,NE);(veryclose,NE);

End

## **ROUTE 5**

Combination One:

Begin

Event=GISEvent

Object A:

(veryclose,NE);(veryclose,E);(veryclose,SE);(veryclose,S);

(veryclose,SW);

End

Combination One:

Begin

Event=GISEvent

Object B:

(veryclose,NE);(veryclose,E);(veryclose,SE);(close,S);

(close,SW);(veryclose,SW);(close,SW);

End

Combination One:

Begin

Event=GISEvent

Object C:

(close,NE);(veryclose,E);(veryclose,SE);(veryclose,S);

(veryclose,SW);(close,SW);

End

Combination One:

Begin

Event=GISEvent

Object D:

(close,NE);(veryclose,E);(veryclose,SE);(veryclose,S);

(veryclose,SW);(close,SW);

End

Combination Two:

Begin

Event=GISEvent

Object A:

(veryclose,NE);(veryclose,E);(veryclose,SE);(veryclose,S);

(veryclose,SW);

End

Combination Two:

Begin

Event=GISEvent

Object B:

(veryclose,NE);(veryclose,E);(veryclose,SE);(close,S);

(close,SW);(veryclose,SW);

End

Combination Two:

Begin

Event=GISEvent

Object C:

(veryclose,NE);(veryclose,E);(veryclose,SE);(veryclose,S);

(veryclose,SW);(close,SW);(veryclose,SW);

End

Combination Two:

Begin

Event=GISEvent

Object D:

(veryclose,NE);(veryclose,E);(veryclose,SE);(veryclose,S);

(veryclose,SW);(close,SW);(veryclose,SW);

End

Combination Three:

Begin

Event=GISEvent

Object A:

(veryclose,NE);(veryclose,E);(veryclose,SE);(close,S);

(close,SW);(veryclose,SW);(close,SW);

End

Combination Three:

Begin

Event=GISEvent

Object B:

(veryclose,NE);(veryclose,E);(veryclose,SE);(close,S);

(close,SW);(veryclose,SW);

End

Combination Three:

Begin

Event=GISEvent

Object C:

(close,NE);(veryclose,E);(veryclose,SE);(close,S);

(close,SW);(veryclose,SW);(close,SW);

End

Combination Three:

Begin

Event=GISEvent

Object D:

(close,NE);(veryclose,E);(veryclose,SE);(close,S);

(close,SW);(veryclose,SW);(close,SW);

End

Combination Four:

Begin

Event=GISEvent

Object A:

(close,NE);(veryclose,E);(veryclose,SE);(veryclose,S);

(veryclose,SW);(close,SW);

End

Combination Four:

Begin

Event=GISEvent

Object B:

(veryclose,NE);(veryclose,E);(veryclose,SE);(veryclose,S);

(veryclose,SW);(close,SW);(veryclose,SW);

End

Combination Four:

Begin

Event=GISEvent

Object C:

(close,NE);(veryclose,E);(veryclose,SE);(close,S);(close,SW);

(veryclose,SW);(close,SW);

End

Combination Four:

Begin

Event=GISEvent

Object D:

(close,NE);(veryclose,E);(veryclose,SE);(close,S);(close,SW);

(veryclose,SW);(close,SW);

End

Combination Five:

Begin

Event=GISEvent

Object A:

(close,NE);(veryclose,E);(veryclose,SE);(veryclose,S);

(veryclose,SW);(close,SW);

End

Combination Five:

Begin

Event=GISEvent

Object B:

(veryclose,NE);(veryclose,E);(veryclose,SE);(veryclose,S);

(veryclose,SW);(close,SW);(veryclose,SW);

End

Combination Five:

Begin

Event=GISEvent

Object C:

(close,NE);(veryclose,E);(veryclose,SE);(close,S);(close,SW);  
(veryclose,SW);(close,SW);

End

Combination Five:

Begin

Event=GISEvent

Object D:

(close,NE);(veryclose,E);(veryclose,SE);(close,S);(close,SW);  
(veryclose,SW);(close,SW);

End

## **ROUTE 6**

Combination One:

Begin

Event=GISEvent

Object A:

(veryclose,NE);(close,NE);(veryclose,NE);(veryclose,N);  
(veryclose,NW);(veryclose,W);(veryclose,SW);

End

Combination One:

Begin

Event=GISEvent

Object B:

(close,NE);(veryclose,NE);(veryclose,N);(veryclose,NW);  
(veryclose,W);(veryclose,SW);

End

Combination One:

Begin

Event=GISEvent

Object C:

(close,NE);(veryclose,NE);(close,N);(close,NW);(veryclose,W);  
(veryclose,SW);



End

Combination One:

Begin

Event=GISEvent

Object D:

(close,NE);(veryclose,NE);(close,N);(close,NW);(veryclose,W);  
(veryclose,SW);

End

Combination Two:

Begin

Event=GISEvent

Object A:

(veryclose,NE);(close,NE);(veryclose,NE);(veryclose,N);  
(veryclose,NW);(veryclose,W);(veryclose,SW);

End

Combination Two:

Begin

Event=GISEvent

Object B:

(veryclose,NE);(close,NE);(veryclose,NE);(veryclose,N);  
(veryclose,NW);(veryclose,W);(veryclose,SW);

End

Combination Two:

Begin

Event=GISEvent

Object C:

(close,NE);(veryclose,NE);(close,N);(near,NW);(close,W);  
(veryclose,SW);

End

Combination Two:

Begin

Event=GISEvent

Object D:

(close,NE);(veryclose,NE);(close,N);(near,NW);(close,W);

(veryclose,SW);

End

Combination Three:

Begin

Event=GISEvent

Object A:

(close,NE);(veryclose,NE);(veryclose,N);(veryclose,NW);

(veryclose,W);(veryclose,SW);

End

Combination Three:

Begin

Event=GISEvent

Object B:

(veryclose,NE);(close,NE);(veryclose,NE);(veryclose,N);

(veryclose,NW);(veryclose,W);(veryclose,SW);

End

Combination Three:

Begin

Event=GISEvent

Object C:

(close,NE);(veryclose,NE);(close,N);(close,NW);(veryclose,W);

(veryclose,SW);

End

Combination Three:

Begin

Event=GISEvent

Object D:

(close,NE);(veryclose,NE);(close,N);(close,NW);(veryclose,W);

(veryclose,SW);

End

Combination Four:

Begin

Event=GISEvent

Object A:

(close,NE);(veryclose,NE);(close,N);(close,NW);(veryclose,W);

(veryclose,SW);

End

Combination Four:

Begin

Event=GISEvent

Object B:

(close,NE);(veryclose,NE);(close,N);(near,NW);(close,W);

(veryclose,SW);

End

Combination Four:

Begin

Event=GISEvent

Object C:

(close,NE);(veryclose,NE);(close,N);(close,NW);(veryclose,W);

(veryclose,SW);

End

Combination Four:

Begin

Event=GISEvent

Object D:

(close,NE);(veryclose,NE);(close,N);(close,NW);(veryclose,W);

(veryclose,SW);

End

Combination Five:

Begin

Event=GISEvent

Object A:

(close,NE);(veryclose,NE);(close,N);(close,NW);(veryclose,W);  
(veryclose,SW);

End

Combination Five:

Begin

Event=GISEvent

Object B:

(close,NE);(veryclose,NE);(close,N);(near,NW);(close,W);  
(veryclose,SW);

End

Combination Five:

Begin

Event=GISEvent

Object C:

(close,NE);(veryclose,NE);(close,N);(close,NW);(veryclose,W);  
(veryclose,SW);

End

Combination Five:

Begin

Event=GISEvent

Object D:

(close,NE);(veryclose,NE);(close,N);(close,NW);(veryclose,W);  
(veryclose,SW);

End

## **ROUTE 7**

Combination One:

Begin

Event=GISEvent

Object A:

(veryclose,NE);(close,N);(close,NW);(veryclose,NW);(close,NW);  
(close,W);(close,SW);(veryclose,SW);(close,SW);

End

Combination One:

Begin

Event=GISEvent

Object B:

(veryclose,NE);(close,N);(close,NW);(veryclose,NW);(close,NW);

(close,W);(close,SW);(veryclose,SW);(close,SW);

End

Combination One:

Begin

Event=GISEvent

Object C:

(veryclose,NE);(close,N);(close,NW);(veryclose,NW);(close,NW);

(veryclose,W);(veryclose,SW);(close,SW);

End

Combination One:

Begin

Event=GISEvent

Object D:

(veryclose,NE);(close,N);(close,NW);(veryclose,NW);(close,NW);

(veryclose,W);(veryclose,SW);(close,SW);

End

Combination Two:

Begin

Event=GISEvent

Object A:

(veryclose,NE);(close,N);(close,NW);(veryclose,NW);(close,NW);

(close,W);(close,SW);(veryclose,SW);(close,SW);

End

Combination Two:

Begin

Event=GISEvent

Object B:

(veryclose,NE);(close,N);(close,NW);(veryclose,NW);(veryclose,W);  
(veryclose,SW);(close,SW);

End

Combination Two:

Begin

Event=GISEvent

Object C:

(veryclose,NE);(close,N);(close,NW);(veryclose,NW);(close,NW);  
(veryclose,W);(veryclose,SW);(close,SW);(veryclose,SW);

End

Combination Two:

Begin

Event=GISEvent

Object D:

(veryclose,NE);(close,N);(close,NW);(veryclose,NW);(close,NW);  
(veryclose,W);(veryclose,SW);(close,SW);(veryclose,SW);

End

Combination Three:

Begin

Event=GISEvent

Object A:

(veryclose,NE);(close,N);(close,NW);(veryclose,NW);(close,NW);  
(close,W);(close,SW);(veryclose,SW);(close,SW);

End

Combination Three:

Begin

Event=GISEvent

Object B:

(veryclose,NE);(close,N);(close,NW);(veryclose,NW);(veryclose,W);  
(veryclose,SW);(close,SW);

End

Combination Three:

Begin

Event=GISEvent

Object C:

(veryclose,NE);(veryclose,N);(veryclose,NW);(veryclose,W);

(veryclose,SW);(close,SW);(veryclose,SW);

End

Combination Three:

Begin

Event=GISEvent

Object D:

(veryclose,NE);(veryclose,N);(veryclose,NW);(veryclose,W);

(veryclose,SW);(close,SW);(veryclose,SW);

End

Combination Four:

Begin

Event=GISEvent

Object A:

(veryclose,NE);(close,N);(close,NW);(veryclose,NW);(close,NW);

(veryclose,W);(veryclose,SW);(close,SW);

End

Combination Four:

Begin

Event=GISEvent

Object B:

(veryclose,NE);(close,N);(close,NW);(veryclose,NW);(close,NW);

(veryclose,W);(veryclose,SW);(close,SW);(veryclose,SW);

End

Combination Four:

Begin

Event=GISEvent

Object C:

(veryclose,NE);(veryclose,N);(veryclose,NW);(veryclose,W);  
(veryclose,SW);(close,SW);(veryclose,SW);

End

Combination Four:

Begin

Event=GISEvent

Object D:

(veryclose,NE);(veryclose,N);(veryclose,NW);(veryclose,W);  
(veryclose,SW);(close,SW);(veryclose,SW);

End

Combination Five:

Begin

Event=GISEvent

Object A:

(veryclose,NE);(close,N);(close,NW);(veryclose,NW);(close,NW);  
(veryclose,W);(veryclose,SW);(close,SW);

End

Combination Five:

Begin

Event=GISEvent

Object B:

(veryclose,NE);(close,N);(close,NW);(veryclose,NW);(close,NW);  
(veryclose,W);(veryclose,SW);(close,SW);(veryclose,SW);

End

Combination Five:

Begin

Event=GISEvent

Object C:

(veryclose,NE);(veryclose,N);(veryclose,NW);(veryclose,W);  
(veryclose,SW);(close,SW);(veryclose,SW);

End

Combination Five:



Begin

Event=GISEvent

Object D:

(veryclose,NE);(veryclose,N);(veryclose,NW);(veryclose,W);

(veryclose,SW);(close,SW);(veryclose,SW);

End

## **ROUTE 8**

Combination One:

Begin

Event=GISEvent

Object A:

(close,SE);(veryclose,E);(veryclose,NE);(veryclose,N);

(veryclose,NW);(veryclose,N);(veryclose,NE);(close,NE);

(veryclose,NE);(close,N);(close,NW);(close,N);(close,NE);

End

Combination One:

Begin

Event=GISEvent

Object B:

(veryclose,SE);(veryclose,E);(veryclose,NE);(veryclose,N);

(veryclose,NW);(veryclose,N);(veryclose,NE);(close,NE);

(close,N);(close,NW);(close,N);(close,NE);

End

Combination One:

Begin

Event=GISEvent

Object C:

(veryclose,SE);(veryclose,E);(veryclose,NE);(veryclose,N);

(veryclose,NW);(veryclose,N);(veryclose,NE);(close,NE);

(close,N);(close,NW);(veryclose,N);(veryclose,NE);

End

Combination One:

Begin

Event=GISEvent

Object D:

(veryclose,SE);(veryclose,E);(veryclose,NE);(veryclose,N);

(veryclose,NW);(veryclose,N);(veryclose,NE);(close,NE);

(close,N);(close,NW);(veryclose,N);(veryclose,NE);

End

Combination Two:

Begin

Event=GISEvent

Object A:

(close,SE);(veryclose,E);(veryclose,NE);(veryclose,N);

(veryclose,NW);(veryclose,N);(veryclose,NE);(close,NE);

(veryclose,NE);(close,N);(close,NW);(close,N);(close,NE);

End

Combination Two:

Begin

Event=GISEvent

Object B:

(close,SE);(veryclose,E);(veryclose,NE);(veryclose,N);

(veryclose,NW);(close,N);(close,NE);(near,N);(near,NW);

(near,N);(near,NE);

End

Combination Two:

Begin

Event=GISEvent

Object C:

(close,SE);(close,E);(close,NE);(close,N);(close,NW);

(veryclose,N);(veryclose,NE);(close,NE);(veryclose,N);

(veryclose,NW);(close,N);(close,NE);

End

Combination Two:

Begin

Event=GISEvent

Object D:

(close,SE);(close,E);(close,NE);(close,N);(close,NW);  
(veryclose,N);(veryclose,NE);(close,NE);(veryclose,N);  
(veryclose,NW);(close,N);(close,NE);

End

Combination Three:

Begin

Event=GISEvent

Object A:

(veryclose,SE);(veryclose,E);(veryclose,NE);(veryclose,N);  
(veryclose,NW);(veryclose,N);(veryclose,NE);(close,NE);  
(close,N);(close,NW);(close,N);(close,NE);

End

Combination Three:

Begin

Event=GISEvent

Object B:

(close,SE);(veryclose,E);(veryclose,NE);(veryclose,N);  
(veryclose,NW);(close,N);(close,NE);(near,N);(near,NW);  
(near,N);(near,NE);

End

Combination Three:

Begin

Event=GISEvent

Object C:

(veryclose,SE);(veryclose,E);(veryclose,NE);(veryclose,N);  
(veryclose,NW);(veryclose,N);(veryclose,NE);(close,NE);  
(near,NE);(near,N);(near,NW);(near,N);(near,NE);

End

Combination Three:

Begin

Event=GISEvent

Object D:

(veryclose,SE);(veryclose,E);(veryclose,NE);(veryclose,N);

(veryclose,NW);(veryclose,N);(veryclose,NE);(close,NE);

(near,NE);(near,N);(near,NW);(near,N);(near,NE);

End

Combination Four:

Begin

Event=GISEvent

Object A:

(veryclose,SE);(veryclose,E);(veryclose,NE);(veryclose,N);

(veryclose,NW);(veryclose,N);(veryclose,NE);(close,NE);

(close,N);(close,NW);(veryclose,N);(veryclose,NE);

End

Combination Four:

Begin

Event=GISEvent

Object B:

(close,SE);(close,E);(close,NE);(close,N);(close,NW);

(veryclose,N);(veryclose,NE);(close,NE);(veryclose,N);

(veryclose,NW);(close,N);(close,NE);

End

Combination Four:

Begin

Event=GISEvent

Object C:

(veryclose,SE);(veryclose,E);(veryclose,NE);(veryclose,N);

(veryclose,NW);(veryclose,N);(veryclose,NE);(close,NE);

(near,NE);(near,N);(near,NW);(near,N);(near,NE);

End

Combination Four:

Begin

Event=GISEvent

Object D:

(veryclose,SE);(veryclose,E);(veryclose,NE);(veryclose,N);

(veryclose,NW);(veryclose,N);(veryclose,NE);(close,NE);

(near,NE);(near,N);(near,NW);(near,N);(near,NE);

End

Combination Five:

Begin

Event=GISEvent

Object A:

(veryclose,SE);(veryclose,E);(veryclose,NE);(veryclose,N);

(veryclose,NW);(veryclose,N);(veryclose,NE);(close,NE);

(close,N);(close,NW);(veryclose,N);(veryclose,NE);

End

Combination Five:

Begin

Event=GISEvent

Object B:

(close,SE);(close,E);(close,NE);(close,N);(close,NW);

(veryclose,N);(veryclose,NE);(close,NE);(veryclose,N);

(veryclose,NW);(close,N);(close,NE);

End

Combination Five:

Begin

Event=GISEvent

Object C:

(veryclose,SE);(veryclose,E);(veryclose,NE);(veryclose,N);

(veryclose,NW);(veryclose,N);(veryclose,NE);(close,NE);

(near,NE);(near,N);(near,NW);(near,N);(near,NE);

End

Combination Five:

Begin

Event=GISEvent

Object D:

(veryclose,SE);(veryclose,E);(veryclose,NE);(veryclose,N);

(veryclose,NW);(veryclose,N);(veryclose,NE);(close,NE);

(near,NE);(near,N);(near,NW);(near,N);(near,NE);

End

## **ROUTE 9**

Combination One:

Begin

Event=GISEvent

Object A:

(veryclose,NW);(veryclose,W);(veryclose,SW);(veryclose,S);

(veryclose,SE);(close,SE);(close,E);(close,NE);(close,N);

(close,NW);(veryclose,W);(veryclose,SW);(close,W);(close,NW);

End

Combination One:

Begin

Event=GISEvent

Object B:

(veryclose,NW);(close,NW);(close,W);(close,SW);(close,S);

(close,SE);(near,E);(near,NE);(near,N);(near,NW);(close,NW);

(veryclose,NW);(close,W);(close,SW);(veryclose,W);(veryclose,NW);

(close,NW);(veryclose,NW);

End

Combination One:

Begin

Event=GISEvent

Object C:

(veryclose,NW);(veryclose,W);(veryclose,SW);(veryclose,S);

```
(veryclose,SE);(close,E);(close,NE);(close,N);(close,NW);  
(veryclose,NW);(veryclose,W);(veryclose,SW);(veryclose,W);  
(veryclose,NW);(close,NW);(veryclose,NW);
```

End

Combination One:

Begin

Event=GISEvent

Object D:

```
(veryclose,NW);(veryclose,W);(veryclose,SW);(veryclose,S);  
(veryclose,SE);(close,E);(close,NE);(close,N);(close,NW);  
(veryclose,NW);(veryclose,W);(veryclose,SW);(veryclose,W);  
(veryclose,NW);(close,NW);(veryclose,NW);
```

End

Combination Two:

Begin

Event=GISEvent

Object A:

```
(veryclose,NW);(veryclose,W);(veryclose,SW);(veryclose,S);  
(veryclose,SE);(close,SE);(close,E);(close,NE);(close,N);  
(close,NW);(veryclose,W);(veryclose,SW);(close,W);(close,NW);
```

End

Combination Two:

Begin

Event=GISEvent

Object B:

```
(veryclose,NW);(close,W);(close,SW);(close,S);(close,SE);  
(close,E);(close,NE);(close,N);(close,NW);(veryclose,NW);  
(close,W);(close,SW);(close,W);(close,NW);(veryclose,NW);  
(close,NW);
```

End

Combination Two:

Begin

Event=GISEvent

Object C:

(veryclose,NW);(close,NW);(close,W);(close,SW);(close,S);

(close,SE);(close,E);(close,NE);(close,N);(close,NW);

(veryclose,NW);(close,NW);(close,W);(close,SW);(close,W);

(close,NW);(near,NW);

End

Combination Two:

Begin

Event=GISEvent

Object D:

(veryclose,NW);(close,NW);(close,W);(close,SW);(close,S);

(close,SE);(close,E);(close,NE);(close,N);(close,NW);

(veryclose,NW);(close,NW);(close,W);(close,SW);(close,W);

(close,NW);(near,NW);

End

Combination Three:

Begin

Event=GISEvent

Object A:

(veryclose,NW);(close,NW);(close,W);(close,SW);(close,S);

(close,SE);(near,E);(near,NE);(near,N);(near,NW);(close,NW);

(veryclose,NW);(close,W);(close,SW);(veryclose,W);(veryclose,NW);

(close,NW);(veryclose,NW);

End

Combination Three:

Begin

Event=GISEvent

Object B:

(veryclose,NW);(close,W);(close,SW);(close,S);(close,SE);

(close,E);(close,NE);(close,N);(close,NW);(veryclose,NW);

(close,W);(close,SW);(close,W);(close,NW);(veryclose,NW);



(close,NW);

End

Combination Three:

Begin

Event=GISEvent

Object C:

(veryclose,NW);(close,NW);(near,NW);(close,W);(veryclose,SW);

(veryclose,S);(veryclose,SE);(close,SE);(near,SE);(close,E);

(veryclose,NE);(veryclose,N);(veryclose,NW);(close,NW);

(veryclose,NW);(close,NW);(close,W);(close,SW);(veryclose,W);

(veryclose,NW);(close,NW);(near,NW);(close,NW);

End

Combination Three:

Begin

Event=GISEvent

Object D:

(veryclose,NW);(close,NW);(near,NW);(close,W);(veryclose,SW);

(veryclose,S);(veryclose,SE);(close,SE);(near,SE);(close,E);

(veryclose,NE);(veryclose,N);(veryclose,NW);(close,NW);

(veryclose,NW);(close,NW);(close,W);(close,SW);(veryclose,W);

(veryclose,NW);(close,NW);(near,NW);(close,NW);

End

Combination Four:

Begin

Event=GISEvent

Object A:

(veryclose,NW);(veryclose,W);(veryclose,SW);(veryclose,S);

(veryclose,SE);(close,E);(close,NE);(close,N);(close,NW);

(veryclose,NW);(veryclose,W);(veryclose,SW);(veryclose,W);

(veryclose,NW);(close,NW);(veryclose,NW);

End

Combination Four:

Begin

Event=GISEvent

Object B:

(veryclose,NW);(close,NW);(close,W);(close,SW);(close,S);  
(close,SE);(close,E);(close,NE);(close,N);(close,NW);  
(veryclose,NW);(close,NW);(close,W);(close,SW);(close,W);  
(close,NW);(near,NW);

End

Combination Four:

Begin

Event=GISEvent

Object C:

(veryclose,NW);(close,NW);(near,NW);(close,W);(veryclose,SW);  
(veryclose,S);(veryclose,SE);(close,SE);(near,SE);(close,E);  
(veryclose,NE);(veryclose,N);(veryclose,NW);(close,NW);  
(veryclose,NW);(close,NW);(close,W);(close,SW);(veryclose,W);  
(veryclose,NW);(close,NW);(near,NW);(close,NW);

End

Combination Four:

Begin

Event=GISEvent

Object D:

(veryclose,NW);(close,NW);(near,NW);(close,W);(veryclose,SW);  
(veryclose,S);(veryclose,SE);(close,SE);(near,SE);(close,E);  
(veryclose,NE);(veryclose,N);(veryclose,NW);(close,NW);  
(veryclose,NW);(close,NW);(close,W);(close,SW);(veryclose,W);  
(veryclose,NW);(close,NW);(near,NW);(close,NW);

End

Combination Five:

Begin

Event=GISEvent

Object A:

```
(veryclose,NW);(veryclose,W);(veryclose,SW);(veryclose,S);  
(veryclose,SE);(close,E);(close,NE);(close,N);(close,NW);  
(veryclose,NW);(veryclose,W);(veryclose,SW);(veryclose,W);  
(veryclose,NW);(close,NW);(veryclose,NW);
```

End

Combination Five:

Begin

Event=GISEvent

Object B:

```
(veryclose,NW);(close,NW);(close,W);(close,SW);(close,S);  
(close,SE);(close,E);(close,NE);(close,N);(close,NW);  
(veryclose,NW);(close,NW);(close,W);(close,SW);(close,W);  
(close,NW);(near,NW);
```

End

Combination Five:

Begin

Event=GISEvent

Object C:

```
(veryclose,NW);(close,NW);(near,NW);(close,W);(veryclose,SW);  
(veryclose,S);(veryclose,SE);(close,SE);(near,SE);(close,E);  
(veryclose,NE);(veryclose,N);(veryclose,NW);(close,NW);  
(veryclose,NW);(close,NW);(close,W);(close,SW);(veryclose,W);  
(veryclose,NW);(close,NW);(near,NW);(close,NW);
```

End

Combination Five:

Begin

Event=GISEvent

Object D:

```
(veryclose,NW);(close,NW);(near,NW);(close,W);(veryclose,SW);  
(veryclose,S);(veryclose,SE);(close,SE);(near,SE);(close,E);  
(veryclose,NE);(veryclose,N);(veryclose,NW);(close,NW);  
(veryclose,NW);(close,NW);(close,W);(close,SW);(veryclose,W);
```

```
(veryclose,NW);(close,NW);(near,NW);(close,NW);  
End
```

### **ROUTE 10**

Combination One:

Begin

Event=GISEvent

Object A:

```
(close,NW);(veryclose,N);(close,NE);(near,N);(close,NW);  
(near,W);(near,SW);(close,SW);(veryclose,SW);(close,S);  
(close,SE);(veryclose,SE);(close,SE);
```

End

Combination One:

Begin

Event=GISEvent

Object B:

```
(close,NW);(veryclose,N);(veryclose,NE);(close,NE);  
(near,NE);(close,N);(veryclose,N);(close,NW);(close,W);  
(close,SW);(near,SW);(close,SW);(veryclose,SW);(veryclose,S);  
(veryclose,SE);(close,SE);
```

End

Combination One:

Begin

Event=GISEvent

Object C:

```
(veryclose,NW);(close,N);(close,NE);(close,N);(near,NW);(close,W);  
(close,SW);(near,SW);(close,SW);(close,S);(close,SE);(veryclose,SE);  
(close,SE);(veryclose,SE);
```

End

Combination One:

Begin

Event=GISEvent

Object D:

(veryclose,NW);(close,N);(close,NE);(close,N);(near,NW);(close,W);  
(close,SW);(near,SW);(close,SW);(close,S);(close,SE);(veryclose,SE);  
(close,SE);(veryclose,SE);

End

Combination Two:

Begin

Event=GISEvent

Object A:

(close,NW);(veryclose,N);(close,NE);(near,N);(close,NW);(near,W);  
(near,SW);(close,SW);(veryclose,SW);(close,S);(close,SE);  
(veryclose,SE);(close,SE);

End

Combination Two:

Begin

Event=GISEvent

Object B:

(close,NW);(close,N);(close,NE);(veryclose,NE);(close,N);(near,N);  
(close,NW);(veryclose,NW);(close,W);(close,SW);(veryclose,SW);(close,SW);  
(near,SW);(close,SW);(close,S);(close,SE);(veryclose,SE);(close,SE);

End

Combination Two:

Begin

Event=GISEvent

Object C:

(veryclose,NW);(close,N);(near,NE);(close,NE);(near,N);(far,N);  
(near,NW);(close,NW);(close,W);(close,SW);(veryclose,SW);(close,SW);  
(near,SW);(close,S);(veryclose,SE);(close,SE);(veryclose,SE);

End

Combination Two:

Begin

Event=GISEvent

Object D:

(veryclose,NW);(close,N);(near,NE);(close,NE);(near,N);(far,N);  
(near,NW);(close,NW);(close,W);(close,SW);(veryclose,SW);(close,SW);  
(near,SW);(close,S);(veryclose,SE);(close,SE);(veryclose,SE);

End

Combination Three:

Begin

Event=GISEvent

Object A:

(close,NW);(veryclose,N);(close,NE);(near,NE);(close,N);(veryclose,N);  
(close,NW);(close,W);(close,SW);(near,SW);(close,SW);(veryclose,SW);  
(veryclose,S);(veryclose,SE);(close,SE);

End

Combination Three:

Begin

Event=GISEvent

Object B:

(close,NW);(close,N);(veryclose,NE);(close,N);(near,N);(close,NW);  
(veryclose,NW);(close,W);(close,SW);(veryclose,SW);(close,SW);(near,SW);  
(close,SW);(close,S);(close,SE);(veryclose,SE);(close,SE);

End

Combination Three:

Begin

Event=GISEvent

Object C:

(close,NW);(close,N);(close,NE);(near,NE);(close,N);(close,NW);  
(near,NW);(close,W);(close,SW);(close,S);(close,SE);

End

Combination Three:

Begin

Event=GISEvent

Object D:

(close,NW);(close,N);(close,NE);(near,NE);(close,N);(close,NW);  
(near,NW);(close,W);(close,SW);(close,S);(close,SE);

End

Combination Four:

Begin

Event=GISEvent

Object A:

(veryclose,NW);(close,N);(close,NE);(close,N);(near,NW);(near,W);  
(near,SW);(close,SW);(near,SW);(close,SW);(close,S);(close,SE);  
(veryclose,SE);(close,SE);(veryclose,SE);

End

Combination Four:

Begin

Event=GISEvent

Object B:

(veryclose,NW);(close,N);(near,N);(close,NE);(near,N);(far,N);  
(near,NW);(close,NW);(close,W);(close,SW);(veryclose,SW);(close,SW);  
(near,SW);(close,S);(veryclose,SE);(close,SE);(veryclose,SE);

End

Combination Four:

Begin

Event=GISEvent

Object C:

(close,NW);(close,N);(close,NE);(near,NE);(close,N);(close,NW);  
(near,W);(near,SW);(close,SW);(close,S);(close,SE);

End

Combination Four:

Begin

Event=GISEvent

Object D:

(close,NW);(close,N);(close,NE);(near,NE);(close,N);(close,NW);  
(near,W);(near,SW);(close,SW);(close,S);(close,SE);

End

Combination Five:

Begin

Event=GISEvent

Object A:

(veryclose,NW);(close,N);(close,NE);(close,N);(near,NW);(near,W);

(near,SW);(close,SW);(near,SW);(close,SW);(close,S);(close,SE);

(veryclose,SE);(close,SE);(veryclose,SE);

End

Combination Five:

Begin

Event=GISEvent

Object B:

(veryclose,NW);(close,N);(near,N);(close,NE);(near,N);(far,N);

(near,NW);(close,NW);(close,W);(close,SW);(veryclose,SW);(close,SW);

(near,SW);(close,S);(veryclose,SE);(close,SE);(veryclose,SE);

End

Combination Five:

Begin

Event=GISEvent

Object C:

(close,NW);(close,N);(close,NE);(near,NE);(close,N);(close,NW);

(near,W);(near,SW);(close,SW);(close,S);(close,SE);

End

Combination Five:

Begin

Event=GISEvent

Object D:

(close,NW);(close,N);(close,NE);(near,NE);(close,N);(close,NW);

(near,W);(near,SW);(close,SW);(close,S);(close,SE);

End



## **ROUTE 11**

Combination One:

Begin

Event=GISEvent

Object A:

(close,NE);(close,E);(close,SE);(veryclose,SE);

(veryclose,S);(veryclose,SW);

End

Combination One:

Begin

Event=GISEvent

Object B:

(close,NE);(veryclose,NE);(close,E);(close,SE);

(veryclose,S);(veryclose,SW);

End

Combination One:

Begin

Event=GISEvent

Object C:

(close,NE);(veryclose,NE);(close,NE);(veryclose,E);

(veryclose,SE);(close,S);(close,SW);

End

Combination One:

Begin

Event=GISEvent

Object D:

(close,NE);(veryclose,NE);(close,NE);(veryclose,E);

(veryclose,SE);(close,S);(close,SW);

End

Combination Two:

Begin

Event=GISEvent

Object A:

(close,NE);(close,E);(close,SE);(veryclose,SE);

(veryclose,S);(veryclose,SW);

End

Combination Two:

Begin

Event=GISEvent

Object B:

(close,NE);(veryclose,NE);(close,NE);(veryclose,E);

(veryclose,SE);(close,SE);(veryclose,S);(veryclose,SW);

End

Combination Two:

Begin

Event=GISEvent

Object C:

(veryclose,NE);(close,NE);(close,E);(close,SE);

(veryclose,SE);(close,S);(close,SW);

End

Combination Two:

Begin

Event=GISEvent

Object D:

(veryclose,NE);(close,NE);(close,E);(close,SE);

(veryclose,SE);(close,S);(close,SW);

End

Combination Three:

Begin

Event=GISEvent

Object A:

(close,NE);(veryclose,NE);(close,E);(close,SE);

(veryclose,S);(veryclose,SW);

End

Combination Three:

Begin

Event=GISEvent

Object B:

(close,NE);(veryclose,NE);(close,NE);(veryclose,E);

(veryclose,SE);(close,SE);(veryclose,S);(veryclose,SW);

End

Combination Three:

Begin

Event=GISEvent

Object C:

(close,NE);(veryclose,NE);(close,NE);(close,E);

(close,SE);(near,SE);(close,SE);(close,S);(close,SW);

End

Combination Three:

Begin

Event=GISEvent

Object D:

(close,NE);(veryclose,NE);(close,NE);(close,E);(close,SE);

(near,SE);(close,SE);(close,S);(close,SW);

End

Combination Four:

Begin

Event=GISEvent

Object A:

(close,NE);(veryclose,NE);(close,NE);(veryclose,E);

(veryclose,SE);(close,S);(close,SW);

End

Combination Four:

Begin

Event=GISEvent

Object B:

(veryclose,NE);(close,NE);(close,E);(close,SE);

(veryclose,SE);(close,S);(close,SW);

End

Combination Four:

Begin

Event=GISEvent

Object C:

(close,NE);(veryclose,NE);(close,NE);(close,E);

(close,SE);(near,SE);(close,SE);(close,S);(close,SW);

End

Combination Four:

Begin

Event=GISEvent

Object D:

(close,NE);(veryclose,NE);(close,NE);(close,E);(close,SE);

(near,SE);(close,SE);(close,S);(close,SW);

End

Combination Five:

Begin

Event=GISEvent

Object A:

(close,NE);(veryclose,NE);(close,NE);(veryclose,E);

(veryclose,SE);(close,S);(close,SW);

End

Combination Five:

Begin

Event=GISEvent

Object B:

(veryclose,NE);(close,NE);(close,E);(close,SE);(veryclose,SE);

(close,S);(close,SW);

End

Combination Five:

Begin

Event=GISEvent

Object C:

(close,NE);(veryclose,NE);(close,NE);(close,E);(close,SE);  
(near,SE);(close,SE);(close,S);(close,SW);

End

Combination Five:

Begin

Event=GISEvent

Object D:

(close,NE);(veryclose,NE);(close,NE);(close,E);(close,SE);  
(near,SE);(close,SE);(close,S);(close,SW);

End

## **ROUTE 12**

Combination One:

Begin

Event=GISEvent

Object A:

(close,SW);(veryclose,S);(veryclose,SE);(veryclose,S);  
(veryclose,SW);(close,SW);(veryclose,SW);(veryclose,S);  
(veryclose,SE);(close,E);(close,NE);(close,N);(close,NW);

End

Combination One:

Begin

Event=GISEvent

Object B:

(near,SE);(close,SE);(close,S);(close,SW);(veryclose,SW);  
(close,S);(close,SE);(veryclose,E);(veryclose,NE);(veryclose,N);  
(veryclose,NW);

End

Combination One:

Begin

Event=GISEvent

Object C:

(close,SW);(veryclose,S);(veryclose,SE);(veryclose,S);

(veryclose,SW);(close,SW);(veryclose,S);(veryclose,SE);

(veryclose,E);(veryclose,NE);(veryclose,N);(veryclose,NW);

End

Combination One:

Begin

Event=GISEvent

Object D:

(close,SW);(veryclose,S);(veryclose,SE);(veryclose,S);

(veryclose,SW);(close,SW);(veryclose,S);(veryclose,SE);

(veryclose,E);(veryclose,NE);(veryclose,N);(veryclose,NW);

End

Combination Two:

Begin

Event=GISEvent

Object A:

(close,SW);(veryclose,S);(veryclose,SE);(veryclose,S);

(veryclose,SW);(close,SW);(veryclose,SW);(veryclose,S);

(veryclose,SE);(close,E);(close,NE);(close,N);(close,NW);

End

Combination Two:

Begin

Event=GISEvent

Object B:

(close,SE);(close,S);(close,SW);(near,SW);(close,SW);

(veryclose,SW);(veryclose,S);(veryclose,SE);(close,E);

(close,NE);(close,N);(close,NW);

End

Combination Two:

Begin

Event=GISEvent

Object C:

(veryclose,SW);(close,S);(close,SE);(close,S);(close,SW);

(veryclose,S);(veryclose,SE);(close,E);(close,NE);(close,N);

(close,NW);

End

Combination Two:

Begin

Event=GISEvent

Object D:

(veryclose,SW);(close,S);(close,SE);(close,S);(close,SW);

(veryclose,S);(veryclose,SE);(close,E);(close,NE);(close,N);

(close,NW);

End

Combination Three:

Begin

Event=GISEvent

Object A:

(near,SW);(close,S);(close,SE);(close,S);(close,SW);

(veryclose,SW);(close,S);(close,SE);(veryclose,E);

(veryclose,NE);(veryclose,N);(veryclose,NW);

End

Combination Three:

Begin

Event=GISEvent

Object B:

(close,SW);(close,S);(close,SE);(close,S);(close,SW);

(near,SW);(close,SW);(veryclose,SW);(veryclose,S);

(veryclose,SE);(close,E);(close,NE);(close,N);(close,NW);

End

Combination Three:

Begin

Event=GISEvent

Object C:

(close,SW);(close,S);(close,SE);(close,S);(close,SW);

(close,S);(close,SE);(veryclose,E);(veryclose,NE);

(veryclose,N);(veryclose,NW);

End

Combination Three:

Begin

Event=GISEvent

Object D:

(close,SW);(close,S);(close,SE);(close,S);(close,SW);

(close,S);(close,SE);(veryclose,E);(veryclose,NE);(veryclose,N);

(veryclose,NW);

End

Combination Four:

Begin

Event=GISEvent

Object A:

(close,SW);(veryclose,S);(veryclose,SE);(veryclose,S);

(veryclose,SW);(close,SW);(veryclose,S);(veryclose,SE);

(veryclose,E);(veryclose,NE);(veryclose,N);(veryclose,NW);

End

Combination Four:

Begin

Event=GISEvent

Object B:

(veryclose,SW);(close,S);(close,SE);(close,S);(close,SW);

(veryclose,S);(veryclose,SE);(close,E);(close,NE);(close,N);

(close,NW);

End



Combination Four:

Begin

Event=GISEvent

Object C:

(close,SE);(close,S);(close,SW);(close,S);(close,SE);

(veryclose,E);(veryclose,NE);(veryclose,N);(veryclose,NW);

End

Combination Four:

Begin

Event=GISEvent

Object D:

(close,SE);(close,S);(close,SW);(close,S);(close,SE);

(veryclose,E);(veryclose,NE);(veryclose,N);(veryclose,NW);

End

Combination Five:

Begin

Event=GISEvent

Object A:

(close,SW);(veryclose,S);(veryclose,SE);(veryclose,S);

(veryclose,SW);(close,SW);(veryclose,S);(veryclose,SE);

(veryclose,E);(veryclose,NE);(veryclose,N);(veryclose,NW);

End

Combination Five:

Begin

Event=GISEvent

Object B:

(veryclose,SW);(close,S);(close,SE);(close,S);(close,SW);

(veryclose,S);(veryclose,SE);(close,E);(close,NE);(close,N);

(close,NW);

End

Combination Five:

Begin

Event=GISEvent

Object C:

(close,SE);(close,S);(close,SW);(close,S);(close,SE);

(veryclose,E);(veryclose,NE);(veryclose,N);(veryclose,NW);

End

Combination Five:

Begin

Event=GISEvent

Object D:

(close,SE);(close,S);(close,SW);(close,S);(close,SE);

(veryclose,E);(veryclose,NE);(veryclose,N);(veryclose,NW);

End

### **ROUTE 13**

Combination One:

Begin

Event=GISEvent

Object A:

(veryclose,SE);(close,E);(close,NE);(veryclose,E);

(veryclose,SE);(close,SE);(veryclose,SE);(veryclose,E);

(veryclose,NE);(veryclose,N);(veryclose,NW);(veryclose,W);

(veryclose,SW);(veryclose,S);(veryclose,SE);

End

Combination One:

Begin

Event=GISEvent

Object B:

(close,SE);(close,E);(close,NE);(veryclose,E);(veryclose,SE);

(close,SE);(veryclose,SE);(close,E);(close,NE);(close,N);

(close,NW);(veryclose,W);(veryclose,SW);(veryclose,S);

(veryclose,SE);

End

Combination One:

Begin

Event=GISEvent

Object C:

(near,SE);(close,SE);(veryclose,SE);(close,SE);(veryclose,E);  
(veryclose,NE);(veryclose,E);(veryclose,SE);(close,SE);  
(veryclose,SE);(veryclose,E);(veryclose,NE);(veryclose,N);  
(veryclose,NW);(veryclose,W);(veryclose,SW);(veryclose,S);  
(veryclose,SE);(close,SE);

End

Combination One:

Begin

Event=GISEvent

Object D:

(near,SE);(close,SE);(veryclose,SE);(close,SE);(veryclose,E);  
(veryclose,NE);(veryclose,E);(veryclose,SE);(close,SE);  
(veryclose,SE);(veryclose,E);(veryclose,NE);(veryclose,N);  
(veryclose,NW);(veryclose,W);(veryclose,SW);(veryclose,S);  
(veryclose,SE);(close,SE);

End

Combination Two:

Begin

Event=GISEvent

Object A:

(veryclose,SE);(close,E);(close,NE);(veryclose,E);(veryclose,SE);  
(close,SE);(veryclose,SE);(veryclose,E);(veryclose,NE);  
(veryclose,N);(veryclose,NW);(veryclose,W);(veryclose,SW);  
(veryclose,S);(veryclose,SE);

End

Combination Two:

Begin

Event=GISEvent

Object B:

(close,SE);(veryclose,SE);(close,SE);(veryclose,E);  
(veryclose,NE);(veryclose,E);(veryclose,SE);(close,SE);  
(veryclose,E);(veryclose,NE);(veryclose,N);(veryclose,NW);  
(close,NW);(veryclose,W);(veryclose,SW);(veryclose,S);  
(veryclose,SE);

End

Combination Two:

Begin

Event=GISEvent

Object C:

(near,SE);(close,SE);(close,E);(close,NE);(close,E);(close,SE);  
(veryclose,SE);(close,SE);(veryclose,SE);(close,E);(close,NE);  
(close,N);(close,NW);(veryclose,W);(veryclose,SW);(veryclose,S);  
(veryclose,SE);

End

Combination Two:

Begin

Event=GISEvent

Object D:

(near,SE);(close,SE);(close,E);(close,NE);(close,E);(close,SE);  
(veryclose,SE);(close,SE);(veryclose,SE);(close,E);(close,NE);  
(close,N);(close,NW);(veryclose,W);(veryclose,SW);(veryclose,S);  
(veryclose,SE);

End

Combination Three:

Begin

Event=GISEvent

Object A:

(close,SE);(close,E);(close,NE);(veryclose,E);(veryclose,SE);  
(close,SE);(veryclose,SE);(close,E);(close,NE);(close,N);  
(close,NW);(veryclose,W);(veryclose,SW);(veryclose,S);

(veryclose,SE);

End

Combination Three:

Begin

Event=GISEvent

Object B:

(close,SE);(veryclose,SE);(close,SE);(veryclose,E);

(veryclose,NE);(veryclose,E);(veryclose,SE);(close,SE);

(veryclose,E);(veryclose,NE);(veryclose,N);(veryclose,NW);

(close,NW);(veryclose,W);(veryclose,SW);

(veryclose,S);(veryclose,SE);

End

Combination Three:

Begin

Event=GISEvent

Object C:

(close,SE);(veryclose,SE);(close,E);(close,NE);(close,E);

(close,SE);(veryclose,SE);(close,E);(close,NE);(close,N);

(close,NW);(veryclose,NW);(close,W);(close,SW);(close,S);

(close,SE);(veryclose,SE);

End

Combination Three:

Begin

Event=GISEvent

Object D:

(close,SE);(veryclose,SE);(close,E);(close,NE);(close,E);

(close,SE);(veryclose,SE);(close,E);(close,NE);(close,N);

(close,NW);(veryclose,NW);(close,W);(close,SW);(close,S);

(close,SE);(veryclose,SE);

End

Combination Four:

Begin

Event=GISEvent

Object A:

(near,SE);(close,SE);(veryclose,SE);(close,SE);(veryclose,E);  
(veryclose,NE);(veryclose,E);(veryclose,SE);(close,SE);  
(veryclose,SE);(veryclose,E);(veryclose,NE);(veryclose,N);  
(veryclose,NW);(veryclose,W);(veryclose,SW);  
(veryclose,S);(veryclose,SE);(close,SE);

End

Combination Four:

Begin

Event=GISEvent

Object B:

(near,SE);(close,SE);(close,E);(close,NE);(close,E);(close,SE);  
(veryclose,SE);(close,SE);(veryclose,SE);(close,E);(close,NE);  
(close,N);(close,NW);(veryclose,W);(veryclose,SW);(veryclose,S);  
(veryclose,SE);

End

Combination Four:

Begin

Event=GISEvent

Object C:

(close,SE);(veryclose,SE);(close,E);(close,NE);(close,E);  
(close,SE);(veryclose,SE);(close,E);(close,NE);(close,N);  
(close,NW);(veryclose,NW);(close,W);(close,SW);(close,S);  
(close,SE);(veryclose,SE);

End

Combination Four:

Begin

Event=GISEvent

Object D:

(close,SE);(veryclose,SE);(close,E);(close,NE);(close,E);  
(close,SE);(veryclose,SE);(close,E);(close,NE);(close,N);

(close,NW);(veryclose,NW);(close,W);(close,SW);(close,S);  
(close,SE);(veryclose,SE);

End

Combination Five:

Begin

Event=GISEvent

Object A:

(near,SE);(close,SE);(veryclose,SE);(close,SE);(veryclose,E);  
(veryclose,NE);(veryclose,E);(veryclose,SE);(close,SE);  
(veryclose,SE);(veryclose,E);(veryclose,NE);(veryclose,N);  
(veryclose,NW);(veryclose,W);(veryclose,SW);(veryclose,S);  
(veryclose,SE);(close,SE);

End

Combination Five:

Begin

Event=GISEvent

Object B:

(near,SE);(close,SE);(close,E);(close,NE);(close,E);(close,SE);  
(veryclose,SE);(close,SE);(veryclose,SE);(close,E);(close,NE);  
(close,N);(close,NW);(veryclose,W);(veryclose,SW);(veryclose,S);  
(veryclose,SE);

End

Combination Five:

Begin

Event=GISEvent

Object C:

(close,SE);(veryclose,SE);(close,E);(close,NE);(close,E);  
(close,SE);(veryclose,SE);(close,E);(close,NE);(close,N);  
(close,NW);(veryclose,NW);(close,W);(close,SW);(close,S);  
(close,SE);(veryclose,SE);

End

Combination Five:

Begin

Event=GISEvent

Object D:

(close,SE);(veryclose,SE);(close,E);(close,NE);(close,E);

(close,SE);(veryclose,SE);(close,E);(close,NE);(close,N);

(close,NW);(veryclose,NW);(close,W);(close,SW);(close,S);

(close,SE);(veryclose,SE);

End

## **ROUTE 14**

Combination One:

Begin

Event=GISEvent

Object A:

(close,NW);(veryclose,NW);(close,NW);(close,N);(close,NE);

(veryclose,NE);(close,NE);(veryclose,NE);(veryclose,E);

(veryclose,SE);(veryclose,S);(close,SW);(veryclose,S);

(veryclose,SE);

End

Combination One:

Begin

Event=GISEvent

Object B:

(close,NW);(veryclose,NW);(close,NW);(veryclose,NW);(close,N);

(close,NE);(veryclose,NE);(close,NE);(near,NE);(close,NE);

(veryclose,NE);(veryclose,E);(veryclose,SE);(close,S);(close,SW);

(near,SW);(close,SW);(veryclose,SW);(veryclose,S);(veryclose,SE);

End

Combination One:

Begin

Event=GISEvent

Object C:



```
(veryclose,NW);(close,NW);(near,N);(near,NE);(close,NE);  
(veryclose,NE);(close,NE);(near,NE);(close,NE);(veryclose,NE);  
(veryclose,E);(veryclose,SE);(close,S);(close,SW);(veryclose,SW);  
(close,SW);(close,S);(close,SE);
```

End

Combination One:

Begin

Event=GISEvent

Object D:

```
(veryclose,NW);(close,NW);(near,N);(near,NE);(close,NE);  
(veryclose,NE);(close,NE);(near,NE);(close,NE);(veryclose,NE);  
(veryclose,E);(veryclose,SE);(close,S);(close,SW);(veryclose,SW);  
(close,SW);(close,S);(close,SE);
```

End

Combination Two:

Begin

Event=GISEvent

Object A:

```
(close,NW);(veryclose,NW);(close,NW);(close,N);(close,NE);  
(veryclose,NE);(close,NE);(veryclose,NE);(veryclose,E);  
(veryclose,SE);(veryclose,S);(close,SW);(close,S);(veryclose,SE);
```

End

Combination Two:

Begin

Event=GISEvent

Object B:

```
(close,NW);(near,NW);(close,N);(veryclose,NE);(close,NE);  
(veryclose,NE);(close,E);(close,SE);(veryclose,S);(veryclose,SW);  
(close,SW);(veryclose,SW);(close,S);(close,SE);
```

End

Combination Two:

Begin

Event=GISEvent

Object C:

(close,NW);(veryclose,NW);(close,NW);(veryclose,N);(veryclose,NE);  
(close,NE);(veryclose,NE);(close,E);(close,SE);(close,S);(close,SW);  
(veryclose,SW);(close,S);(close,SE);

End

Combination Two:

Begin

Event=GISEvent

Object D:

(close,NW);(veryclose,NW);(close,NW);(veryclose,N);(veryclose,NE);  
(close,NE);(veryclose,NE);(close,E);(close,SE);(close,S);(close,SW);  
(veryclose,SW);(close,S);(close,SE);

End

Combination Three:

Begin

Event=GISEvent

Object A:

(close,NW);(veryclose,NW);(close,NW);(veryclose,NW);(close,N);  
(close,NE);(veryclose,NE);(close,NE);(near,NE);(close,NE);  
(veryclose,NE);(veryclose,E);(veryclose,SE);(close,S);(near,SW);  
(close,S);(veryclose,S);(veryclose,SE);

End

Combination Three:

Begin

Event=GISEvent

Object B:

(close,NW);(near,NW);(close,N);(veryclose,NE);(close,NE);  
(veryclose,NE);(close,E);(close,SE);(veryclose,S);(close,SW);  
(veryclose,SW);(close,S);(close,SE);

End

Combination Three:

Begin

Event=GISEvent

Object C:

(close,NW);(veryclose,NW);(veryclose,N);(veryclose,NE);  
(close,NE);(veryclose,E);(veryclose,SE);(veryclose,S);  
(veryclose,SW);(close,SW);(veryclose,SW);(close,S);(close,SE);

End

Combination Three:

Begin

Event=GISEvent

Object D:

(close,NW);(veryclose,NW);(veryclose,N);(veryclose,NE);  
(close,NE);(veryclose,E);(veryclose,SE);(veryclose,S);  
(veryclose,SW);(close,SW);(veryclose,SW);(close,S);  
(close,SE);

End

Combination Four:

Begin

Event=GISEvent

Object A:

(veryclose,NW);(close,NW);(near,N);(near,NE);(close,NE);  
(veryclose,NE);(close,NE);(near,NE);(close,NE);(veryclose,NE);  
(veryclose,E);(veryclose,SE);(close,S);(near,S);(close,SW);  
(veryclose,SW);(close,S);(close,SE);

End

Combination Four:

Begin

Event=GISEvent

Object B:

(close,NW);(veryclose,NW);(close,NW);(veryclose,N);(veryclose,NE);  
(close,NE);(veryclose,NE);(close,E);(close,SE);(close,S);  
(veryclose,SW);(close,S);(close,SE);

End

Combination Four:

Begin

Event=GISEvent

Object C:

(close,NW);(veryclose,NW);(veryclose,N);(veryclose,NE);(close,NE);

(veryclose,E);(veryclose,SE);(veryclose,S);(veryclose,SW);

(close,SW);(veryclose,SW);(close,S);

(close,SE);

End

Combination Four:

Begin

Event=GISEvent

Object D:

(close,NW);(veryclose,NW);(veryclose,N);(veryclose,NE);(close,NE);

(veryclose,E);(veryclose,SE);(veryclose,S);(veryclose,SW);(close,SW);

(veryclose,SW);(close,S);

(close,SE);

End

Combination Five:

Begin

Event=GISEvent

Object A:

(veryclose,NW);(close,NW);(near,N);(near,NE);(close,NE);(veryclose,NE);

(close,NE);(near,NE);(close,NE);(veryclose,NE);(veryclose,E);

(veryclose,SE);(close,S);(near,S);(close,SW);(veryclose,SW);

(close,S);(close,SE);

End

Combination Five:

Begin

Event=GISEvent

Object B:

```
(close,NW);(veryclose,NW);(close,NW);(veryclose,N);(veryclose,NE);  
(close,NE);(veryclose,NE);(close,E);(close,SE);(close,S);(veryclose,SW);  
(close,S);(close,SE);
```

End

Combination Five:

Begin

Event=GISEvent

Object C:

```
(close,NW);(veryclose,NW);(veryclose,N);(veryclose,NE);(close,NE);  
(veryclose,E);(veryclose,SE);(veryclose,S);(veryclose,SW);(close,SW);  
(veryclose,SW);(close,S);  
(close,SE);
```

End

Combination Five:

Begin

Event=GISEvent

Object D:

```
(close,NW);(veryclose,NW);(veryclose,N);(veryclose,NE);(close,NE);  
(veryclose,E);(veryclose,SE);(veryclose,S);(veryclose,SW);(close,SW);  
(veryclose,SW);(close,S);(close,SE);
```

End

# Appendix C

## Motion Pattern Recognition Using Synthetic Data

## Appendix C

1) RESULTS OF RECOGNITION OF TWO OBJECT PATTERNS  
 USING SYNTHETIC DATA (Status="Yes" means the pattern is recognised)

Instance	Status	Instance	Status	Instance	Status	Instance	Status
1	Yes	26	Yes	51	Yes	76	Yes
2	Yes	27	Yes	52	Yes	77	Yes
3	Yes	28	Yes	53	Yes	78	Yes
4	Yes	29	Yes	54	Yes	79	No
5	Yes	30	Yes	55	No	80	Yes
6	Yes	31	No	56	Yes	81	Yes
7	Yes	32	Yes	57	Yes	82	Yes
8	Yes	33	Yes	58	Yes	83	Yes
9	Yes	34	Yes	59	Yes	84	Yes
10	Yes	35	Yes	60	Yes	85	Yes
11	Yes	36	Yes	61	Yes	86	Yes
12	No	37	Yes	62	No	87	Yes
13	Yes	38	Yes	63	Yes	88	Yes
14	Yes	39	Yes	64	Yes	89	Yes
15	No	40	Yes	65	Yes	90	Yes
16	Yes	41	No	66	Yes	91	Yes
17	Yes	42	Yes	67	Yes	92	Yes
18	Yes	43	Yes	68	Yes	93	Yes
19	Yes	44	Yes	69	Yes	94	No
20	Yes	45	Yes	70	Yes	95	Yes
21	Yes	46	Yes	71	Yes	96	Yes
22	Yes	47	Yes	72	Yes	97	Yes
23	Yes	48	Yes	73	Yes	98	Yes
24	Yes	49	Yes	74	Yes	99	Yes
25	Yes	50	Yes	75	Yes	100	No

## Appendix C

### 2) RESULTS OF RECOGNITION OF FOUR OBJECT PATTERNS

USING SYNTHETIC DATA ("Yes" for "Recognised" and "No" for "Not Recognised")

#### a) RESULTS FOR OBJECT A (Object Number 2)

Instance	Status	Instance	Status	Instance	Status	Instance	Status
1	No	26	No	51	Yes	76	Yes
2	Yes	27	Yes	52	Yes	77	Yes
3	Yes	28	Yes	53	Yes	78	Yes
4	Yes	29	Yes	54	Yes	79	Yes
5	No	30	Yes	55	Yes	80	Yes
6	Yes	31	Yes	56	No	81	Yes
7	Yes	32	Yes	57	Yes	82	Yes
8	No	33	Yes	58	Yes	83	Yes
9	Yes	34	Yes	59	Yes	84	Yes
10	Yes	35	Yes	60	Yes	85	Yes
11	Yes	36	Yes	61	No	86	No
12	Yes	37	Yes	62	Yes	87	Yes
13	Yes	38	Yes	63	Yes	88	No
14	Yes	39	Yes	64	Yes	89	Yes
15	Yes	40	Yes	65	Yes	90	Yes
16	Yes	41	Yes	66	Yes	91	Yes
17	Yes	42	Yes	67	Yes	92	Yes
18	Yes	43	No	68	Yes	93	Yes
19	Yes	44	Yes	69	Yes	94	Yes
20	Yes	45	Yes	70	Yes	95	Yes
21	No	46	Yes	71	Yes	96	Yes
22	Yes	47	Yes	72	Yes	97	Yes
23	Yes	48	Yes	73	Yes	98	No
24	No	49	Yes	74	Yes	99	Yes
25	Yes	50	Yes	75	Yes	100	Yes



## Appendix C

### 2) RESULTS OF RECOGNITION OF FOUR OBJECT PATTERNS

USING SYNTHETIC DATA ("Yes" for "Recognised" and "No" for "Not Recognised")

#### a) RESULTS FOR OBJECT B (Object Number 3)

Instance	Status	Instance	Status	Instance	Status	Instance	Status
1	Yes	26	No	51	Yes	76	Yes
2	Yes	27	Yes	52	Yes	77	Yes
3	Yes	28	Yes	53	Yes	78	Yes
4	Yes	29	Yes	54	Yes	79	Yes
5	Yes	30	Yes	55	Yes	80	Yes
6	Yes	31	Yes	56	Yes	81	Yes
7	Yes	32	Yes	57	Yes	82	Yes
8	Yes	33	Yes	58	Yes	83	Yes
9	Yes	34	Yes	59	Yes	84	Yes
10	Yes	35	Yes	60	Yes	85	Yes
11	Yes	36	Yes	61	Yes	86	Yes
12	Yes	37	Yes	62	Yes	87	Yes
13	Yes	38	Yes	63	Yes	88	Yes
14	Yes	39	Yes	64	Yes	89	Yes
15	Yes	40	Yes	65	Yes	90	Yes
16	Yes	41	Yes	66	Yes	91	Yes
17	Yes	42	Yes	67	Yes	92	Yes
18	Yes	43	Yes	68	Yes	93	Yes
19	Yes	44	Yes	69	Yes	94	Yes
20	Yes	45	Yes	70	Yes	95	Yes
21	No	46	Yes	71	Yes	96	Yes
22	Yes	47	Yes	72	Yes	97	Yes
23	Yes	48	Yes	73	Yes	98	Yes
24	No	49	Yes	74	Yes	99	Yes
25	Yes	50	Yes	75	Yes	100	Yes

## Appendix C

### 2) RESULTS OF RECOGNITION OF FOUR OBJECT PATTERNS

USING SYNTHETIC DATA (“Yes” for “Recognised” and “No” for “Not Recognised”)

#### a) RESULTS FOR OBJECT C (Object Number 4)

Instance	Status	Instance	Status	Instance	Status	Instance	Status
1	Yes	26	Yes	51	Yes	76	Yes
2	Yes	27	Yes	52	Yes	77	Yes
3	Yes	28	Yes	53	Yes	78	Yes
4	Yes	29	Yes	54	Yes	79	Yes
5	Yes	30	Yes	55	No	80	Yes
6	Yes	31	Yes	56	Yes	81	No
7	Yes	32	Yes	57	Yes	82	Yes
8	Yes	33	Yes	58	Yes	83	Yes
9	Yes	34	Yes	59	Yes	84	Yes
10	Yes	35	Yes	60	No	85	No
11	Yes	36	Yes	61	Yes	86	Yes
12	Yes	37	Yes	62	Yes	87	No
13	Yes	38	Yes	63	Yes	88	Yes
14	Yes	39	Yes	64	Yes	89	Yes
15	Yes	40	Yes	65	Yes	90	Yes
16	Yes	41	Yes	66	Yes	91	Yes
17	Yes	42	No	67	Yes	92	Yes
18	Yes	43	Yes	68	Yes	93	Yes
19	Yes	44	Yes	69	Yes	94	Yes
20	Yes	45	Yes	70	Yes	95	Yes
21	No	46	Yes	71	Yes	96	Yes
22	Yes	47	Yes	72	Yes	97	No
23	Yes	48	Yes	73	Yes	98	Yes
24	No	49	Yes	74	Yes	99	Yes
25	Yes	50	Yes	75	Yes	100	Yes

# Appendix D

## Motion Pattern Recognition from Video Input

## 1. Recorded Binary Motion Patterns for Right Overtake in Learning and Recognition from Video Input

Begin

Event=Overtake

Object A:

(rl-,L);(rl,L);(rl+,L);(Opposite-,L);  
(Opposite,L);(Opposite+,B&L);(lr-,B);  
(lr,B&R);(lr+,EIB);(Same-,EOIB);  
(Same,EOIB);(Same+,EOIB);(rl+,EOIB);  
(rl,EOIB);(rl-,EOIB);(rl,EIB);(rl+,EIB);  
(Same+,EIB);(Same,EIB);(Same-,EIB);(lr+,EOIB);  
(lr,EOIB);(lr-,EOIB);(Opposite+,EOIB);  
(Opposite,EOIB);(Opposite+,EOIB);(lr-,EOIB);  
(lr,EOIB);(lr+,EOIB);(Same-,EOIB);(lr+,EOIB);  
(lr,EOIB);(lr-,EOIB);(Opposite+,EOIB);  
(Opposite,EOIB);(Opposite+,EOIB);(lr-,EOIB);  
(lr,EOIB);(lr+,EOIB);(Same-,EOIB);(lr+,EIB);  
(lr,EIB);(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);  
(Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);  
(Same-,EIB);(lr+,EOIB);(lr,EOIB);(lr-,EOIB);  
(lr,EOIB);(lr+,EOIB);(lr,EOIB);(lr-,EOIB);  
(Opposite+,EOIB);(Opposite,EOIB);(Opposite+,EOIB);  
(lr-,EOIB);(lr,EOIB);(lr+,EOIB);(Same-,EOIB);  
(lr+,EOIB);(Same-,EOIB);(Same,EOIB);(Same+,EOIB);  
(Same,EOIB);(Same-,EOIB);(lr+,EOIB);(lr,EOIB);  
(lr-,EOIB);(Opposite+,EOIB);(Opposite,EOIB);  
(Opposite+,EOIB);(lr-,EOIB);(lr,EOIB);(lr+,EOIB);  
(Same-,EIB);(Same,EIB);(Same+,EIB);(Same,EIB);  
(Same-,EIB);(lr+,EIB);(Same-,EOIB);(lr+,EIB);  
(lr,EIB);(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);  
(Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);

(Same-,EIB);(lr+,EIB);(Same-,EIB);(lr+,EIB);  
(lr,EIB);(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);  
(Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);  
(Same-,EIB);(lr+,EIB);(lr,EIB);(lr+,EIB);  
(Same-,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);  
(Opposite+,EIB);(Opposite,EIB);(Opposite-,EIB);  
(rl+,EIB);(rl,EIB);(rl-,EIB);(rl,EIB);  
(rl+,EIB);(Same+,EIB);(Same,EIB);(Same-,EIB);  
(lr+,EIB);(lr,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);  
(Opposite+,EIB);(Opposite,EIB);(Opposite+,EIB);  
(lr-,EIB);(lr,EIB);(lr+,EIB);(Same-,EIB);(Same,EIB);  
(Same+,EIB);(Same,EIB);(Same-,EIB);(lr+,EIB);  
(lr,EIB);(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);  
(Opposite-,EIB);(rl+,EIB);(rl,EIB);(rl+,EIB);  
(Same+,EIB);(Same,EIB);(Same-,EIB);(lr+,EIB);  
(lr,EIB);(lr+,EIB);(Same-,EIB);(lr+,EIB);  
(lr,EIB);(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);  
(Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);  
(Same-,EIB);(Same,EIB);(Same+,EIB);(Same,EIB);  
(Same-,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);  
(Opposite+,EIB);(Opposite,EIB);(Opposite+,EIB);  
(lr-,EIB);(lr,EIB);(lr+,EIB);(Same-,EIB);(Same,EIB);  
(Same+,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);(rl,EIB);  
(rl+,EIB);(Same+,EIB);(Same,EIB);(Same-,EIB);  
(lr+,EIB);(lr,EIB);(lr-,EIB);(Opposite+,EIB);  
(Opposite,EIB);(Opposite+,EIB);(lr-,EIB);  
(lr,EIB);(lr+,EIB);(Same-,EIB);(lr+,EIB);  
(lr,EIB);(lr-,EIB);(Opposite+,EIB);(lr-,EIB);  
(lr,EIB);(lr+,EIB);(Same-,EIB);(lr+,EIB);(lr,EIB);  
(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);  
(Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);  
(Same-,EIB);(Same,EIB);(Same+,EIB);(Same,EIB);

(rl+,EIB);(rl,EIB);(rl-,EIB);(Opposite-,EIB);  
 (Opposite,EIB);(Opposite+,EIB);(lr-,EIB);  
 (lr,EIB);(lr+,EIB);(Same-,EIB);(Same,EIB);  
 (Same+,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);  
 (rl,EIB);(rl+,EIB);(Opposite-,EIB);(Opposite,EIB);  
 (Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);  
 (Same-,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);(lr,EIB);  
 (lr-,EIB);(Opposite+,EIB);(Opposite,EIB);(Opposite-,EIB);  
 (rl+,EIB);(rl,EIB);(rl-,EIB);(rl,EIB);(rl+,EIB);(Same+,EIB);  
 (Same,EIB);(Same-,EIB);(lr+,EIB);(lr,EIB);(lr+,EIB);  
 (lr,EIB);(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);  
 (Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);(lr,EIB);  
 (lr-,EIB);(Opposite+,EIB);(lr-,EIB);(lr,EIB);  
 (lr+,EIB);(Same-,EIB);(Same,EIB);(Same+,EIB);(Same,EIB);  
 (rl+,EIB);(rl,EIB);(rl-,EIB);(Opposite-,EIB);(Opposite,EIB);  
 (Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);(Same-,EIB);  
 (Same,EIB);(Same+,EIB);(Same,EIB);(Same-,EIB);(lr+,EIB);  
 (lr,EIB);(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);  
 (Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);(Same-,EIB);  
 (Same,EIB);(Same+,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);(rl,EIB);  
 (rl+,EIB);(Same+,EIB);(Same,EIB);(Same-,EIB);(lr+,EIB);  
 (lr,EIB);(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);  
 (Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);(lr,EIB);  
 (lr-,EIB);(Opposite+,EIB);(Opposite,EIB);(Opposite+,EIB);  
 (lr-,EIB);(lr,EIB);(lr+,EIB);(Same-,EIB);(lr+,EIB);(lr,EIB);  
 (lr-,EIB);(Opposite+,EIB);(Opposite,EIB);(Opposite+,EIB);  
 (lr-,EIB);(lr,EIB);(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);  
 (Opposite-,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);(Same+,EIB);  
 (rl+,EIB);(rl,EIB);(rl+,EIB);(Same+,EIB);(Same,EIB);  
 (rl+,EIB);(rl,EIB);(rl-,EIB);(Opposite-,EIB);(Opposite,EIB);  
 (Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);(Same-,EIB);  
 (Same,EIB);(Same+,EIB);(Same,EIB);(Same-,EIB);(lr+,EIB);

(lr,EIB);(lr-,EIB);(Opposite+,EIB);(lr-,EIB);(lr,EIB);  
 (lr+,EIB);(Same-,EIB);(Same,EIB);(Same+,EIB);(Same,EIB);  
 (Same-,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);(Opposite+,EIB);  
 (Opposite,EIB);(Opposite-,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);  
 (Same+,EIB);(Same,EIB);(Same-,EIB);(lr+,EIB);(lr,EIB);  
 (lr-,EIB);(Opposite+,EIB);(Opposite,EIB);(Opposite+,EIB);  
 (lr-,EIB);(lr,EIB);(lr+,EIB);(Same-,EIB);(Same,EIB);  
 (Same+,EIB);(rl+,EIB);(rl,EIB);(rl+,EIB);(Opposite-,EIB);  
 (Opposite,EIB);(Opposite-,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);  
 (Same+,EIB);(Same,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);  
 (Opposite-,EIB);(Opposite,EIB);(Opposite+,EIB);(lr-,EIB);  
 (lr,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);(Opposite+,EIB);  
 (Opposite,EIB);(Opposite+,EIB);(lr-,EIB);(Opposite+,EIB);  
 (Opposite,EIB);(Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);  
 (Same-,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);(Opposite+,EIB);  
 (Opposite,EIB);(Opposite-,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);  
 (Same+,EIB);(Same,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);  
 (Opposite-,EIB);(Opposite,EIB);(Opposite-,EIB);(rl+,EIB);  
 (rl,EIB);(rl-,EIB);(Same+,EIB);(Same,EIB);(Same-,EIB);  
 (lr+,EIB);(lr,EIB);(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);  
 (Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);(lr,EIB);  
 (lr-,EIB);(Opposite+,EIB);(Opposite,EIB);(Opposite+,EIB);  
 (lr-,EIB);(lr,EIB);(lr+,EIB);(Same-,EIB);(Same,EIB);  
 (Same+,EIB);(Same,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);  
 (Opposite-,EIB);(Opposite,EIB);(Opposite-,EIB);  
 (rl+,EIB);(rl,EIB);(rl-,EIB);(Same+,EIB);(Same,EIB);  
 (Same-,EIB);(lr+,EIB);(lr,EIB);(lr+,EIB);(Same-,EIB);  
 (Same,EIB);(Same+,EIB);(Same,EIB);(Same-,EIB);(lr+,EIB);  
 (lr,EIB);(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);(Opposite-,EIB);  
 (rl+,EIB);(rl,EIB);(rl-,EIB);(Same+,EIB);(Same,EIB);(Same-,EIB);(lr+,EIB);  
 (lr,EIB);(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);(Opposite+,EIB);(lr-,EIB);  
 (lr,EIB);(lr+,EIB);(Same-,EIB);(Same,EIB);(Same-,EIB);(lr+,EIB);(lr,EIB);

(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);(Opposite+,EIB);(lr-,EIB);(lr,EIB);  
 (lr+,EIB);(Same-,EIB);(Same,EIB);(Same+,EIB);(Same,EIB);(Same-,EIB);(lr+,EIB);  
 (lr,EIB);(lr+,EIB);(Same-,EIB);(Same,EIB);(Same+,EIB);(Same,EIB);(Same-,EIB);  
 (lr+,EIB);(Same-,EIB);(Same,EIB);(Same+,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);  
 (rl,EIB);(rl+,EIB);(Opposite-,EIB);(Opposite,EIB);(Opposite+,EIB);(lr-,EIB);  
 (lr,EIB);(lr+,EIB);(Same-,EIB);(Same,EIB);(Same+,EIB);(rl+,EIB);(rl,EIB);  
 (rl-,EIB);(rl,EIB);(rl+,EIB);(Same+,EIB);(Same,EIB);(Same-,EIB);(lr+,EIB);  
 (lr,EIB);(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);(Opposite-,EIB);(rl+,EIB);  
 (rl,EIB);(rl-,EIB);(rl,EIB);(rl+,EIB);(Opposite-,EIB);(Opposite,EIB);  
 (Opposite+,EIB);(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);(Opposite+,EIB);  
 (lr-,EIB);(lr,EIB);(lr+,EIB);(Same-,EIB);(Same,EIB);(Same+,EIB);(rl+,EIB);  
 (rl,EIB);(rl-,EIB);(rl,EIB);(rl+,EIB);(Same+,EIB);(Same,EIB);(rl+,EIB);  
 (rl,EIB);(rl-,EIB);(Opposite-,EIB);(Opposite,EIB);(Opposite+,EIB);(lr-,EIB);  
 (lr,EIB);(lr+,EIB);(Same-,EIB);(Same,EIB);(Same+,EIB);(rl+,EIB);(rl,EIB);  
 (rl-,EIB);(rl,EIB);(rl+,EIB);(Same+,EIB);(Same,EIB);(Same+,EIB);(Same,EIB);  
 (Same-,EIB);(lr+,EIB);(Same-,EIB);(Same,EIB);(Same+,EIB);(rl+,EIB);(rl,EIB);  
 (rl-,EIB);(rl,EIB);(rl+,EIB);(Opposite-,EIB);(Opposite,EIB);(Opposite-,EIB);  
 (rl+,EIB);(rl,EIB);(rl-,EIB);(Same+,EIB);(Same,EIB);(Same-,EIB);(lr+,EIB);  
 (Same-,EIB);(Same,EIB);(Same+,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);(rl,EIB);  
 (rl+,EIB);(Same+,EIB);(Same,EIB);(Same-,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);  
 (Opposite+,EIB);(Opposite,EIB);(Opposite-,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);  
 (Same+,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);(rl,EIB);(rl+,EIB);(Opposite-,EIB);  
 (Opposite,EIB);(Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);(Same-,EIB);  
 (Same,EIB);(Same+,EIB);(Same,EIB);(Same-,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);  
 (Opposite+,EIB);(Opposite,EIB);(Opposite,EIIB);(Opposite+,EIIB);(lr-,EIIB);  
 (lr,EIIB);(lr+,EIIB);(Same-,EIIB);(Same,EIB);(Same+,EIB);(rl+,EIB);(rl,EIB);  
 (rl-,EIB);(rl,EIIB);(rl+,EIIB);(Same+,EIIB);(Same,EIIB);(Same-,EIIB);(lr+,EIIB);  
 (Same-,EIIB);(Same,EIIB);(Same+,EIIB);(Same,EIIB);(Same-,EIIB);(lr+,EIIB);  
 (lr,EIIB);(lr-,EIIB);(Opposite+,EIIB);(lr-,EIIB);(lr,EIIB);(lr+,EIIB);  
 (Same-,EIIB);(Same,EIIB);(Same+,EIIB);(Same,EIIB);(rl+,EIIB);(rl,EIIB);  
 (rl-,EIIB);(Opposite-,EIIB);(Opposite,EIIB);(Opposite+,EIIB);(lr-,EIIB);  
 (lr,EIIB);(lr+,EIIB);(Same-,EIIB);(Same,EIIB);(Same-,EIIB);(lr+,EIIB);



(Same-,EOIB);(Same,EOIB);(Same+,EOIB);(r1+,EOIB);(r1,EOIB);(r1-,EOIB);  
(r1,EOIB);(r1+,EOIB);(Opposite-,EOIB);(Opposite,EOIB);(Opposite-,EOIB);  
(r1+,EOIB);(r1,EOIB);(r1-,EOIB);(Same+,EOIB);(Same,EOIB);(Same-,EOIB);  
(lr+,EOIB);(Same-,EOIB);(Same,EOIB);(Same+,EOIB);(r1+,EOIB);(r1,EOIB);  
(r1-,EOIB);(r1,EOIB);(r1+,EOIB);(Same+,EOIB);(Same,EOIB);(Same-,EOIB);  
(lr+,EOIB);(Same-,EOIB);(Same,EOIB);(Same+,EOIB);(Same,EOIB);(r1+,EOIB);  
(r1,EOIB);(r1-,EOIB);(Opposite-,EOIB);(Opposite,EOIB);(Opposite-,EOIB);  
(r1+,EOIB);(r1,EOIB);(r1-,EOIB);(r1,EOIB);(r1+,EOIB);(Same+,EOIB);  
(Same,EOIB);(Same+,EOIB);(r1+,EOIB);(r1,EOIB);(r1+,EOIB);(Same+,EOIB);  
(Same,EOIB);(Same-,EOIB);(lr+,EOIB);(Same-,EOIB);(Same,EOIB);(Same-,EOIB);  
(lr+,EOIB);(lr,EOIB);(lr-,EOIB);(Opposite+,EOIB);(Opposite,EOIB);  
(Opposite+,EOIB);(lr-,EOIB);(lr,EOIB);(lr+,EOIB);(Same-,EOIB);(Same,EOIB);  
(Same+,EOIB);(Same,EOIB);(r1+,EOIB);(r1,EOIB);(r1-,EOIB);(Opposite-,EOIB);  
(Opposite,EOIB);(Opposite-,EOIB);(r1+,EOIB);(r1,EOIB);(r1-,EOIB);(Same+,EOIB);  
(Same,EOIB);(Same-,EOIB);(lr+,EOIB);(Same-,EOIB);(Same,EOIB);(Same+,EOIB);  
(r1+,EOIB);(r1,EOIB);(r1-,EOIB);(r1,EOIB);(r1+,EOIB);(Same+,EOIB);(Same,EOIB);  
(Same-,EOIB);(lr+,EOIB);(Same-,EOIB);(Same,EOIB);(Same+,EOIB);(r1+,EOIB);  
(r1,EOIB);(r1-,EOIB);(r1,EOIB);(r1+,EOIB);(Opposite-,EOIB);(Opposite,EOIB);  
(Opposite-,EOIB);(r1+,EOIB);(r1,EOIB);(r1-,EOIB);(Same+,EOIB);(Same,EOIB);  
(r1+,EOIB);(r1,EOIB);(r1-,EOIB);(Opposite-,EOIB);(Opposite,EOIB);  
(Opposite+,EOIB);(lr-,EOIB);(lr,EOIB);(lr+,EOIB);(Same-,EOIB);(Same,EOIB);  
(Same+,EOIB);(r1+,EOIB);(r1,EOIB);(r1-,EOIB);(r1,EOIB);(r1+,EOIB);  
(Same+,EOIB);(Same,EOIB);(Same-,EOIB);(lr+,EOIB);(Same-,EOIB);(Same,EOIB);  
(Same+,EOIB);(Same,EOIB);(r1+,EOIB);(r1,EOIB);(r1-,EOIB);(Opposite-,EOIB);  
(Opposite,EOIB);(Opposite-,EOIB);(r1+,EOIB);(r1,EOIB);(r1-,EOIB);(Same+,EOIB);  
(r1+,EOIB);(r1,EOIB);(r1-,EOIB);(r1,EOIB);(r1+,EOIB);(Same+,EOIB);(Same,EOIB);  
(Same-,EOIB);(lr+,EOIB);(Same-,EOIB);(Same,EOIB);(Same+,EOIB);(r1+,EOIB);  
(r1,EOIB);(r1-,EOIB);(r1,EOIB);(r1+,EOIB);(Same+,EOIB);(Same,EOIB);(Same-,EOIB);  
(lr+,EOIB);(lr,EOIB);(lr-,EOIB);(Opposite+,EOIB);(Opposite,EOIB);(Opposite+,EOIB);  
(lr-,EOIB);(lr,EOIB);(lr+,EOIB);(lr,EOIB);(lr-,EOIB);(Opposite+,EOIB);  
(Opposite,EOIB);(Opposite-,EOIB);(r1+,EOIB);(r1,EOIB);(r1-,EOIB);(r1,EOIB);  
(r1+,EOIB);(Same+,EOIB);(Same,EOIB);(r1+,EOIB);(r1,EOIB);(r1-,EOIB);

(Opposite-,EOIB);(Opposite,EOIB);(Opposite-,EOIB);(r1+,EOIB);(r1,EOIB);  
(r1-,EOIB);(Same+,EOIB);(Same,EOIB);(Same-,EOIB);(lr+,EOIB);(lr,EOIB);  
(lr-,EOIB);(Opposite+,EOIB);(lr-,EOIB);(lr,EOIB);(lr+,EOIB);(lr,EOIB);  
(lr-,EOIB);(Opposite+,EOIB);(Opposite,EOIB);(Opposite-,EOIB);(r1+,EOIB);  
(r1,EOIB);(r1-,EOIB);(Same+,EOIB);(Same,EOIB);(Same-,EOIB);(lr+,EOIB);  
(lr,EOIB);(lr-,EOIB);(Opposite+,EOIB);(Opposite,EOIB);(Opposite+,EOIB);  
(lr-,EOIB);(lr,EOIB);(lr-,EOIB);(Opposite+,EOIB);(Opposite,EOIB);  
End  
Begin  
Event=Overtake  
Object A:  
(lr+,EIF);(Same-,EIF);(Same-,EOIF);(Same-,ALL);(Same-,EOIB);(lr+,EOIB);  
(lr,EOIB);(lr-,EOIB);(Opposite+,EOIB);(Opposite,EOIB);(Opposite+,EOIB);  
(lr-,EOIB);(lr,EOIB);(lr+,EOIB);(Same-,EOIB);(Same,EOIB);(Same+,EOIB);  
(r1+,EOIB);(r1,EOIB);(r1-,EOIB);(r1,EOIB);(r1+,EOIB);(Same+,EOIB);  
(Same,EOIB);(Same-,EOIB);(lr+,EOIB);(lr,EOIB);(lr-,EOIB);(Opposite+,EOIB);  
(Opposite,EOIB);(Opposite+,EOIB);(lr-,EOIB);(lr,EOIB);(lr+,EOIB);  
(Same-,EOIB);(Same,EOIB);(Same+,EOIB);(r1+,EOIB);(r1,EOIB);(r1-,EOIB);  
(r1,EOIB);(r1+,EOIB);(Same+,EOIB);(Same,EOIB);(Same-,EOIB);(lr+,EOIB);  
(Same-,EOIB);(lr+,EOIB);(lr,EOIB);(lr-,EOIB);(Opposite+,EOIB);  
(Opposite,EOIB);(Opposite+,EOIB);(lr-,EOIB);(lr,EOIB);(lr+,EOIB);  
(Same-,EOIB);(Same,EOIB);(Same+,EOIB);(Same,EOIB);(Same-,EOIB);(Same,EOIB);  
(Same+,EOIB);(r1+,EOIB);(r1,EOIB);(r1-,EOIB);(r1,EOIB);(r1+,EOIB);  
(Opposite-,EOIB);(Opposite,EOIB);(Opposite+,EOIB);(lr-,EOIB);(lr,EOIB);  
(lr+,EOIB);(Same-,EOIB);(Same,EOIB);(Same+,EOIB);(r1+,EOIB);(r1,EOIB);  
(r1-,EOIB);(r1,EOIB);(r1+,EOIB);(Opposite-,EOIB);(Opposite,EOIB);  
(Opposite-,EOIB);(r1+,EOIB);(r1,EOIB);(r1-,EOIB);(r1,EOIB);(r1+,EOIB);  
(Opposite-,EOIB);(Opposite,EOIB);(Opposite+,EOIB);(lr-,EOIB);(lr,EOIB);  
(lr+,EOIB);(Same-,EOIB);(lr+,EOIB);(lr,EOIB);(lr+,EOIB);(Same-,EOIB);  
(lr+,EOIB);(lr,EOIB);(lr-,EOIB);(Opposite+,EOIB);(Opposite,EOIB);  
(Opposite-,EOIB);(r1+,EOIB);(r1,EOIB);(r1-,EOIB);(Same+,EOIB);(Same,EOIB);  
(Same-,EOIB);(lr+,EOIB);(lr,EOIB);(lr+,EOIB);(Same-,EOIB);(lr+,EOIB);

(lr,E0IB);(lr-,E0IB);(Opposite+,E0IB);(Opposite,E0IB);(Opposite-,E0IB);  
 (rl+,E0IB);(rl,E0IB);(rl-,E0IB);(Same+,E0IB);(Same,E0IB);(Same-,E0IB);  
 (lr+,E0IB);(Same-,E0IB);(Same,E0IB);(Same+,E0IB);(rl+,E0IB);(rl,E0IB);  
 (rl-,E0IB);(rl,E0IB);(rl+,E0IB);(Opposite-,E0IB);(Opposite,E0IB);  
 (Opposite+,E0IB);(lr-,E0IB);(lr,E0IB);(lr+,E0IB);(Same-,E0IB);(lr+,E0IB);  
 (lr,E0IB);(lr+,E0IB);(Same-,E0IB);(Same,E0IB);(Same+,E0IB);(Same+,EIB);  
 (Same,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);(Opposite-,EIB);(Opposite,EIB);  
 (Opposite-,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);(rl,EIB);(rl+,EIB);  
 (Same+,EIB);(Same,EIB);(Same-,EIB);(lr+,EIB);(lr,EIB);(lr+,EIB);(lr,EIB);  
 (lr-,EIB);(Opposite+,EIB);(Opposite,EIB);(Opposite+,EIB);(lr-,EIB);  
 (lr,EIB);(lr+,EIB);(Same-,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);  
 (Opposite+,EIB);(Opposite,EIB);(Opposite+,EIB);(lr-,EIB);(lr,EIB);  
 (lr+,EIB);(Same-,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);(Opposite+,EIB);  
 (Opposite,EIB);(Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);  
 (Same-,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);  
 (Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);(Same-,EIB);(lr+,EIB);  
 (lr,EIB);(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);(Opposite-,EIB);  
 (rl+,EIB);(rl,EIB);(rl+,EIB);(Same+,EIB);(Same,EIB);(Same-,EIB);  
 (lr+,EIB);(lr,EIB);(lr-,EIB);(Opposite+,EIB);(Opposite,EIB)  
 ;(Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);(Same-,EIB);(lr+,EIB);  
 (lr,EIB);(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);(Opposite+,EIB);  
 (lr-,EIB);(lr,EIB);(lr+,EIB);(Same-,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);  
 (Opposite+,EIB);(Opposite,EIB);(Opposite+,EIB);(lr-,EIB);(lr,EIB);  
 (lr+,EIB);(Same-,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);(Opposite+,EIB);  
 (Opposite,EIB);(Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);(lr,EIB);  
 (lr-,EIB);(Opposite+,EIB);(Opposite,EIB);(Opposite+,EIB);(lr-,EIB);  
 (lr,EIB);(lr+,EIB);(Same-,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);  
 (Opposite+,EIB);(Opposite,EIB);(Opposite+,EIB);(lr-,EIB);(lr,EIB);  
 (lr+,EIB);(Same-,EIB);(Same,EIB);(Same+,EIB);(Same,EIB);(rl+,EIB);  
 (rl,EIB);(rl-,EIB);(Opposite-,EIB);(Opposite,EIB);(Opposite+,EIB);  
 (lr-,EIB);(lr,EIB);(lr+,EIB);(Same-,EIB);(Same,EIB);(Same+,EIB);  
 (Same,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);(Opposite-,EIB);(Opposite,EIB);

(Opposite-,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);(Same+,EIB);(Same,EIB);  
 (rl+,EIB);(rl,EIB);(rl-,EIB);(Opposite-,EIB);(Opposite,EIB);  
 (Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr-,EIB);(Opposite+,EIB);  
 (Opposite,EIB);(Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);(Same-,EIB);  
 (Same,EIB);(Same+,EIB);(Same,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);  
 (Opposite-,EIB);(Opposite,EIB);(Opposite+,EIB);(lr-,EIB);(lr,EIB);  
 (lr+,EIB);(Same-,EIB);(Same,EIB);(Same+,EIB);(Same,EIB);(rl+,EIB);  
 (rl,EIB);(rl-,EIB);(Opposite-,EIB);(Opposite,EIB);(Opposite+,EIB);  
 (lr-,EIB);(lr,EIB);(lr+,EIB);(Same-,EIB);(lr+,EIB);(lr,EIB);  
 (lr-,EIB);(Opposite+,EIB);(Opposite,EIB);(Opposite+,EIB);(lr-,EIB);  
 (lr,EIB);(lr+,EIB);(Same-,EIB);(Same,EIB);(Same+,EIB);(Same,EIB);  
 (rl+,EIB);(rl,EIB);(rl-,EIB);(Opposite-,EIB);(Opposite,EIB);  
 (Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);  
 (Opposite+,EIB);(Opposite,EIB);(Opposite+,EIB);(lr-,EIB);(lr,EIB);  
 (lr-,EIB);(Opposite+,EIB);(Opposite,EIB);(Opposite+,EIB);  
 (lr-,EIB);(lr,EIB);(lr+,EIB);(Same-,EIB);(Same,EIB);(Same+,EIB);  
 (Same,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);(Opposite-,EIB);  
 (Opposite,EIB);(Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);  
 (Same-,EIB);(Same,EIB);(Same+,EIB);(Same,EIB);(Same-,EIB);  
 (lr+,EIB);(lr,EIB);(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);  
 (Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);(lr,EIB);(lr+,EIB);  
 (Same-,EIB);(Same,EIB);(Same+,EIB);(Same,EIB);(Same-,EIB);  
 (lr+,EIB);(lr,EIB);(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);  
 (Opposite-,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);(Same+,EIB);  
 (Same,EIB);(Same-,EIB);(lr+,EIB);(lr,EIB);(lr+,EIB);(lr,EIB);  
 (lr-,EIB);(Opposite+,EIB);(Opposite,EIB);(Opposite+,EIB);  
 (lr-,EIB);(lr,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);(Opposite+,EIB);  
 (Opposite,EIB);(Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);  
 (lr,EIB);(lr+,EIB);(Same-,EIB);(Same,EIB);(Same+,EIB);(Same,EIB);  
 (rl+,EIB);(rl,EIB);(rl-,EIB);(Opposite-,EIB);(Opposite,EIB);  
 (Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);(Same-,EIB);  
 (Same,EIB);(Same+,EIB);(Same,EIB);(Same-,EIB);(lr+,EIB);(lr,EIB);

(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);(Opposite+,EIB);  
 (lr-,EIB);(lr,EIB);(lr+,EIB);(Same-,EIB);(Same,EIB);(Same+,EIB);  
 (Same,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);(Opposite-,EIB);  
 (Opposite,EIB);(Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);  
 (lr,EIB);(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);  
 (Opposite-,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);(Same+,EIB);  
 (Same,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);(Opposite-,EIB);  
 (Opposite,EIB);(Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);  
 (Same-,EIB);(Same,EIB);(Same+,EIB);(rl+,EIB);(rl,EIB);  
 (rl+,EIB);(Same+,EIB);(Same,EIB);(Same-,EIB);(lr+,EIB);  
 (lr,EIB);(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);  
 (Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);(lr,EIB);  
 (lr-,EIB);(Opposite+,EIB);(Opposite,EIB);(Opposite-,EIB);  
 (rl+,EIB);(rl,EIB);(rl-,EIB);(Same+,EIB);(Same,EIB);  
 (Same-,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);(Opposite+,EIB);  
 (Opposite,EIB);(Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);  
 (Same-,EIB);(Same,EIB);(Same+,EIB);(Same,EIB);(Same-,EIB);  
 (lr+,EIB);(lr,EIB);(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);  
 (Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);(Same-,EIB);  
 (Same,EIB);(Same+,EIB);(Same,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);  
 (Opposite-,EIB);(Opposite,EIB);(Opposite+,EIB);(lr-,EIB);  
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 (Opposite,EIB);(Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);  
 (Same-,EIB);(lr+,EIB);(Same-,EIB);(Same,EIB);(Same+,EIB);  
 (Same,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);(Opposite-,EIB);  
 (Opposite,EIB);(Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);  
 (lr,EIB);(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);(Opposite-,EIB);  
 (rl+,EIB);(rl,EIB);(rl-,EIB);(Same+,EIB);(Same,EIB);(Same-,EIB);  
 (lr+,EIB);(lr,EIB);(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);  
 (Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);  
 (Opposite+,EIB);(Opposite,EIB);(Opposite-,EIB);(rl+,EIB);(rl,EIB);  
 (rl-,EIB);(Same+,EIB);(Same,EIB);(Same-,EIB);(lr+,EIB);(lr,EIB);

(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);(Opposite-,EIB);(rl+,EIB);  
 (rl,EIB);(rl-,EIB);(Same+,EIB);(Same,EIB);(rl+,EIB);(rl,EIB);  
 (rl-,EIB);(Opposite-,EIB);(Opposite,EIB);(Opposite+,EIB);(lr-,EIB);  
 (lr,EIB);(lr+,EIB);(Same-,EIB);(Same,EIB);(Same+,EIB);(Same,EIB);  
 (rl+,EIB);(rl,EIB);(rl-,EIB);(Opposite-,EIB);(Opposite,EIB);  
 (Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);  
 (Opposite+,EIB);(Opposite,EIB);(Opposite-,EIB);(rl+,EIB);(rl,EIB);  
 (rl-,EIB);(Same+,EIB);(Same,EIB);(Same-,EIB);(lr+,EIB);(lr,EIB);  
 (lr-,EIB);(Opposite+,EIB);(Opposite,EIB);(Opposite+,EIB);(lr-,EIB);  
 (lr,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);  
 (Opposite-,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);(Same+,EIB);(Same,EIB);  
 (Same-,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);  
 (Opposite-,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);(Same+,EIB);(Same,EIB);  
 (Same-,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);(Opposite+,EIB);  
 (Opposite,EIB);(Opposite-,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);  
 (Same+,EIB);(Same,EIB);(Same-,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);  
 (Opposite+,EIB);(Opposite,EIB);(Opposite+,EIB);(lr-,EIB);(lr,EIB);  
 (lr+,EIB);(lr,EIB);(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);  
 (Opposite-,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);(Same+,EIB);(Same,EIB);  
 (rl+,EIB);(rl,EIB);(rl-,EIB);(Opposite-,EIB);(Opposite,EIB);  
 (Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);(Same-,EIB);(Same,EIB);  
 (Same+,EIB);(Same,EIB);(Same-,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);  
 (Opposite+,EIB);(Opposite,EIB);(Opposite-,EIB);(rl+,EIB);(rl,EIB);  
 (rl-,EIB);(Same+,EIB);(Same,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);  
 (Opposite-,EIB);(Opposite,EIB);(Opposite+,EIB);(lr-,EIB);  
 (lr,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);(Opposite+,EIB);  
 (Opposite,EIB);(Opposite-,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);  
 (Same+,EIB);(Same,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);  
 (Opposite-,EIB);(Opposite,EIB);(Opposite+,EIB);(lr-,EIB);  
 (lr,EIB);(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);  
 (Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);(Same-,EIB);  
 (Same,EIB);(Same+,EIB);(rl+,EIB);(rl,EIB);(rl+,EIB);

(Opposite-,EIB);(Opposite,EIB);(Opposite+,EIB);  
(Opposite,EIB);(Opposite+,EIB);(lr-,EIB);(lr,EIB);  
(lr+,EIB);(Same-,EIB);(Same,EIB);(Same+,EIB);(Same,EIB);  
(Same-,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);(Opposite+,EIB);  
(Opposite,EIB);(Opposite+,EIB);(lr-,EIB);(lr,EIB);  
(lr+,EIB);(Same-,EIB);(Same,EIB);(Same+,EIB);(rl+,EIB);  
(rl,EIB);(rl-,EIB);(rl,EIB);(rl+,EIB);(Same+,EIB);  
(rl+,EIB);(rl,EIB);(rl+,EIB);(Opposite-,EIB);  
(Opposite,EIB);(Opposite-,EIB);(rl+,EIB);(rl,EIB);  
(rl-,EIB);(Same+,EIB);(rl+,EIB);(rl,EIB);(rl+,EIB);  
(Same+,EIB);(Same,EIB);(Same-,EIB);(lr+,EIB);(lr,EIB);  
(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);(Opposite-,EIB);  
(rl+,EIB);(rl,EIB);(rl+,EIB);(Same+,EIB);(Same,EIB);  
(Same-,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);(Opposite+,EIB);  
(Opposite,EIB);(Opposite-,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);  
(Same+,EIB);(Same,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);  
(Opposite-,EIB);(Opposite,EIB);(Opposite+,EIB);(lr-,EIB);  
(lr,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);(Opposite+,EIB);  
(Opposite,EIB);(Opposite-,EIB);(rl+,EIB);(rl,EIB);  
(rl-,EIB);(Same+,EIB);(Same,EIB);(Same-,EIB);(lr+,EIB);  
(lr,EIB);(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);  
(Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);(lr,EIB);  
(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);(Opposite+,EIB);  
(lr-,EIB);(lr,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);  
(Opposite+,EIB);(Opposite,EIB);(Opposite-,EIB);  
(rl+,EIB);(rl,EIB);(rl-,EIB);(Same+,EIB);(Same,EIB);  
(Same-,EIB);(lr+,EIB);(lr,EIB);(lr+,EIB);(lr,EIB);  
(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);(Opposite-,EIB);  
(rl+,EIB);(rl,EIB);(rl-,EIB);(Same+,EIB);(Same,EIB);  
(rl+,EIB);(rl,EIB);(rl-,EIB);(Opposite-,EIB);  
(Opposite,EIB);(Opposite-,EIB);(rl+,EIB);(rl,EIB);  
(rl-,EIB);(rl,EIB);(rl+,EIB);(Opposite-,EIB);

(Opposite,EIB);(Opposite+,EIB);(lr-,EIB);(lr,EIB);  
(lr+,EIB);(lr,EIB);(lr-,EIB);(Opposite+,EIB);  
(Opposite,EIB);(Opposite+,EIB);(lr-,EIB);(lr,EIB);  
(lr+,EIB);(lr,EIB);(lr-,EIB);(Opposite+,EIB);  
(Opposite,EIB);(Opposite+,EIB);(lr-,EIB);(lr,EIB);  
(lr+,EIB);(lr,EIB);(lr-,EIB);(Opposite+,EIB);  
(Opposite,EIB);(Opposite-,EIB);(rl+,EIB);(rl,EIB);  
(rl-,EIB);(Same+,EIB);(Same,EIB);(rl+,EIB);(rl,EIB);  
(rl-,EIB);(Opposite-,EIB);(Opposite,EIB);  
End  
Begin  
Event=Overtake  
Object A:  
(lr+,EIF);(Same-,EIF);(Same-,EOIF);(Same-,ALL);  
(Same-,EOIB);(lr+,EOIB);(lr,EOIB);(lr-,EOIB);  
(Opposite+,EOIB);(Opposite,EOIB);(Opposite+,EOIB);  
(lr-,EOIB);(lr,EOIB);(lr+,EOIB);(Same-,EOIB);  
(Same,EOIB);(Same+,EOIB);(rl+,EOIB);(rl,EOIB);  
(rl-,EOIB);(rl,EOIB);(rl+,EOIB);(Same+,EOIB);  
(Same,EOIB);(Same-,EOIB);(lr+,EOIB);(lr,EOIB);  
(lr-,EOIB);(Opposite+,EOIB);(Opposite,EOIB);  
(Opposite+,EOIB);(lr-,EOIB);(lr,EOIB);(lr+,EOIB);  
(Same-,EOIB);(Same,EOIB);(Same+,EOIB);  
(rl+,EOIB);(rl,EOIB);(rl-,EOIB);(rl,EOIB);  
(rl+,EOIB);(Same+,EOIB);(Same,EOIB);(Same-,EOIB);  
(lr+,EOIB);(Same-,EOIB);(lr+,EOIB);(lr,EOIB);  
(lr-,EOIB);(Opposite+,EOIB);(Opposite,EOIB);  
(Opposite+,EOIB);(lr-,EOIB);(lr,EOIB);(lr+,EOIB);  
(Same-,EOIB);(Same,EOIB);(Same+,EOIB);(Same,EOIB);  
(Same-,EOIB);(Same,EOIB);(Same+,EOIB);(rl+,EOIB);  
(rl,EOIB);(rl-,EOIB);(rl,EOIB);(rl+,EOIB);  
(Opposite-,EOIB);(Opposite,EOIB);(Opposite+,EOIB);



(lr-,EOIB);(lr,EOIB);(lr+,EOIB);(Same-,EOIB);  
(Same,EOIB);(Same+,EOIB);(rl+,EOIB);(rl,EOIB);  
(rl-,EOIB);(rl,EOIB);(rl+,EOIB);(Opposite-,EOIB);  
(Opposite,EOIB);(Opposite-,EOIB);(rl+,EOIB);  
(rl,EOIB);(rl-,EOIB);(rl,EOIB);(rl+,EOIB)  
;(Opposite-,EOIB);(Opposite,EOIB);(Opposite+,EOIB);  
(lr-,EOIB);(lr,EOIB);(lr+,EOIB);(Same-,EOIB);  
(lr+,EOIB);(lr,EOIB);(lr+,EOIB);(Same-,EOIB);  
(lr+,EOIB);(lr,EOIB);(lr-,EOIB);(Opposite+,EOIB);  
(Opposite,EOIB);(Opposite-,EOIB);(rl+,EOIB);  
(rl,EOIB);(rl-,EOIB);(Same+,EOIB);(Same,EOIB);  
(Same-,EOIB);(lr+,EOIB);(lr,EOIB);(lr+,EOIB);  
(Same-,EOIB);(lr+,EOIB);(lr,EOIB);(lr-,EOIB);  
(Opposite+,EOIB);(Opposite,EOIB);(Opposite-,EOIB);  
(rl+,EOIB);(rl,EOIB);(rl-,EOIB);(Same+,EOIB);  
(Same,EOIB);(Same-,EOIB);(lr+,EOIB);(Same-,EOIB);  
(Same,EOIB);(Same+,EOIB);(rl+,EOIB);(rl,EOIB);  
(rl-,EOIB);(rl,EOIB);(rl+,EOIB);(Opposite-,EOIB);  
(Opposite,EOIB);(Opposite+,EOIB);(lr-,EOIB);  
(lr,EOIB);(lr+,EOIB);(Same-,EOIB);(lr+,EOIB);  
(lr,EOIB);(lr+,EOIB);(Same-,EOIB);(Same,EOIB);  
(Same+,EOIB);(Same+,EIB);(Same,EIB);(rl+,EIB);  
(rl,EIB);(rl-,EIB);(Opposite-,EIB);(Opposite,EIB);  
(Opposite-,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);  
(rl,EIB);(rl+,EIB);(Same+,EIB);(Same,EIB);  
(Same-,EIB);(lr+,EIB);(lr,EIB);(lr+,EIB);  
(lr,EIB);(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);  
(Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);  
(Same-,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);  
(Opposite+,EIB);(Opposite,EIB);(Opposite+,EIB);  
(lr-,EIB);(lr,EIB);(lr+,EIB);(Same-,EIB);  
(lr+,EIB);(lr,EIB);(lr-,EIB);(Opposite+,EIB);

(Opposite,EIB);(Opposite+,EIB);(lr-,EIB);  
(lr,EIB);(lr+,EIB);(Same-,EIB);(lr+,EIB);  
(lr,EIB);(lr-,EIB);(Opposite+,EIB);  
(Opposite,EIB);(Opposite+,EIB);(lr-,EIB);  
(lr,EIB);(lr+,EIB);(Same-,EIB);(lr+,EIB);  
(lr,EIB);(lr-,EIB);(Opposite+,EIB);  
(Opposite,EIB);(Opposite-,EIB);(r1+,EIB);  
(r1,EIB);(r1+,EIB);(Same+,EIB);(Same,EIB);  
(Same-,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);  
(Opposite+,EIB);(Opposite,EIB);  
(Opposite+,EIB);(lr-,EIB);(lr,EIB);  
(lr+,EIB);(Same-,EIB);(lr+,EIB);(lr,EIB);  
(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);  
(Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);  
(Same-,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);  
(Opposite+,EIB);(Opposite,EIB);(Opposite+,EIB);  
(lr-,EIB);(lr,EIB);(lr+,EIB);(lr,EIB);  
(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);  
(Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);  
(Same-,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);  
(Opposite+,EIB);(Opposite,EIB);(Opposite+,EIB);  
(lr-,EIB);(lr,EIB);(lr+,EIB);(Same-,EIB);  
(Same,EIB);(Same+,EIB);(Same,EIB);(r1+,EIB);  
(r1,EIB);(r1-,EIB);(Opposite-,EIB);  
(Opposite,EIB);(Opposite+,EIB);(lr-,EIB);  
(lr,EIB);(lr+,EIB);(Same-,EIB);(Same,EIB);  
(Same+,EIB);(Same,EIB);(r1+,EIB);(r1,EIB);  
(r1-,EIB);(Opposite-,EIB);(Opposite,EIB);  
(Opposite-,EIB);(r1+,EIB);(r1,EIB);(r1-,EIB);

(Same+,EIB);(Same,EIB);(r1+,EIB);(r1,EIB);  
(r1-,EIB);(Opposite-,EIB);(Opposite,EIB);  
(Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr-,EIB);  
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(lr-,EIB);(lr,EIB);(lr+,EIB);(Same-,EIB);  
(Same,EIB);(Same+,EIB);(Same,EIB);(r1+,EIB);  
(r1,EIB);(r1-,EIB);(Opposite-,EIB);(Opposite,EIB);  
(Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);  
(Same-,EIB);(Same,EIB);(Same+,EIB);(Same,EIB);  
(r1+,EIB);(r1,EIB);(r1-,EIB);(Opposite-,EIB);  
(Opposite,EIB);(Opposite+,EIB);(lr-,EIB);(lr,EIB);  
(lr+,EIB);(Same-,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);  
(Opposite+,EIB);(Opposite,EIB);(Opposite+,EIB);  
(lr-,EIB);(lr,EIB);(lr+,EIB);(Same-,EIB);(Same,EIB);  
(Same+,EIB);(Same,EIB);(r1+,EIB);(r1,EIB);(r1-,EIB);  
(Opposite-,EIB);(Opposite,EIB);(Opposite+,EIB);  
(lr-,EIB);(lr,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);  
(Opposite+,EIB);(Opposite,EIB);(Opposite+,EIB);  
(lr-,EIB);(lr,EIB);(lr-,EIB);(Opposite+,EIB);  
(Opposite,EIB);(Opposite+,EIB);(lr-,EIB);  
(lr,EIB);(lr+,EIB);(Same-,EIB);(Same,EIB);  
(Same+,EIB);(Same,EIB);(r1+,EIB);(r1,EIB);  
(r1-,EIB);(Opposite-,EIB);(Opposite,EIB);  
(Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);  
(Same-,EIB);(Same,EIB);(Same+,EIB);(Same,EIB);  
(Same-,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);  
(Opposite+,EIB);(Opposite,EIB);(Opposite+,EIB);  
(lr-,EIB);(lr,EIB);(lr+,EIB);(lr,EIB);  
(lr+,EIB);(Same-,EIB);(Same,EIB);(Same+,EIB);  
(Same,EIB);(Same-,EIB);(lr+,EIB);(lr,EIB);  
(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);  
(Opposite-,EIB);(r1+,EIB);(r1,EIB);(r1-,EIB);

(Same+,EIB);(Same,EIB);(Same-,EIB);(lr+,EIB);  
(lr,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);  
(Opposite+,EIB);(Opposite,EIB);(Opposite+,EIB);  
(lr-,EIB);(lr,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);  
(Opposite+,EIB);(Opposite,EIB);(Opposite+,EIB);  
(lr-,EIB);(lr,EIB);(lr+,EIB);(lr,EIB);(lr+,EIB);  
(Same-,EIB);(Same,EIB);(Same+,EIB);(Same,EIB);  
(rl+,EIB);(rl,EIB);(rl-,EIB);(Opposite-,EIB);  
(Opposite,EIB);(Opposite+,EIB);(lr-,EIB);  
(lr,EIB);(lr+,EIB);(Same-,EIB);(Same,EIB);  
(Same+,EIB);(Same,EIB);(Same-,EIB);(lr+,EIB);  
(lr,EIB);(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);  
(Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);  
(Same-,EIB);(Same,EIB);(Same+,EIB);(Same,EIB);  
(rl+,EIB);(rl,EIB);(rl-,EIB);(Opposite-,EIB);  
(Opposite,EIB);(Opposite+,EIB);(lr-,EIB);  
(lr,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);  
(Opposite+,EIB);(Opposite,EIB);(Opposite-,EIB);  
(rl+,EIB);(rl,EIB);(rl-,EIB);(Same+,EIB);  
(Same,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);  
(Opposite-,EIB);(Opposite,EIB);(Opposite+,EIB);  
(lr-,EIB);(lr,EIB);(lr+,EIB);(Same-,EIB);  
(Same,EIB);(Same+,EIB);(rl+,EIB);(rl,EIB);  
(rl+,EIB);(Same+,EIB);(Same,EIB);(Same-,EIB);  
(lr+,EIB);(lr,EIB);(lr-,EIB);(Opposite+,EIB);  
(Opposite,EIB);(Opposite+,EIB);(lr-,EIB);  
(lr,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);  
(Opposite+,EIB);(Opposite,EIB);(Opposite-,EIB);  
(rl+,EIB);(rl,EIB);(rl-,EIB);(Same+,EIB);  
(Same,EIB);(Same-,EIB);(lr+,EIB);(lr,EIB);  
(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);  
(Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);

(Same-,EIB);(Same,EIB);(Same+,EIB);(Same,EIB);  
(Same-,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);  
(Opposite+,EIB);(Opposite,EIB);(Opposite+,EIB);  
(lr-,EIB);(lr,EIB);(lr+,EIB);(Same-,EIB);  
(Same,EIB);(Same+,EIB);(Same,EIB);(rl+,EIB);  
(rl,EIB);(rl-,EIB);(Opposite-,EIB);(Opposite,EIB);  
(Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);  
(lr,EIB);(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);  
(Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);  
(Same-,EIB);(lr+,EIB);(Same-,EIB);(Same,EIB);  
(Same+,EIB);(Same,EIB);(rl+,EIB);(rl,EIB);  
(rl-,EIB);(Opposite-,EIB);(Opposite,EIB);  
(Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);  
(lr,EIB);(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);  
(Opposite-,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);  
(Same+,EIB);(Same,EIB);(Same-,EIB);(lr+,EIB);  
(lr,EIB);(lr-,EIB);(Opposite+,EIB);  
(Opposite,EIB);(Opposite+,EIB);(lr-,EIB);  
(lr,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);  
(Opposite+,EIB);(Opposite,EIB);(Opposite-,EIB);  
(rl+,EIB);(rl,EIB);(rl-,EIB);(Same+,EIB);  
(Same,EIB);(Same-,EIB);(lr+,EIB);(lr,EIB);  
(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);  
(Opposite-,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);  
(Same+,EIB);(Same,EIB);(rl+,EIB);(rl,EIB);  
(rl-,EIB);(Opposite-,EIB);(Opposite,EIB);  
(Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);  
(Same-,EIB);(Same,EIB);(Same+,EIB);(Same,EIB);  
(rl+,EIB);(rl,EIB);(rl-,EIB);(Opposite-,EIB);  
(Opposite,EIB);(Opposite+,EIB);(lr-,EIB);  
(lr,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);  
(Opposite+,EIB);(Opposite,EIB);(Opposite-,EIB);

(rl+,EIB);(rl,EIB);(rl-,EIB);(Same+,EIB);  
(Same,EIB);(Same-,EIB);(lr+,EIB);(lr,EIB);  
(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);  
(Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);  
(lr,EIB);(lr-,EIB);(Opposite+,EIB);  
(Opposite,EIB);(Opposite-,EIB);(rl+,EIB);  
(rl,EIB);(rl-,EIB);(Same+,EIB);(Same,EIB);  
(Same-,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);  
(Opposite+,EIB);(Opposite,EIB);(Opposite-,EIB);  
(rl+,EIB);(rl,EIB);(rl-,EIB);(Same+,EIB);  
(Same,EIB);(Same-,EIB);(lr+,EIB);(lr,EIB);  
(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);  
(Opposite-,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);  
(Same+,EIB);(Same,EIB);(Same-,EIB);(lr+,EIB);  
(lr,EIB);(lr-,EIB);(Opposite+,EIB);  
(Opposite,EIB);(Opposite+,EIB);(lr-,EIB);  
(lr,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);(Opposite+,EIB);  
(Opposite,EIB);(Opposite-,EIB);(rl+,EIB);(rl,EIB);  
(rl-,EIB);(Same+,EIB);(Same,EIB);(rl+,EIB);(rl,EIB);  
(rl-,EIB);(Opposite-,EIB);(Opposite,EIB);(Opposite+,EIB);  
(lr-,EIB);(lr,EIB);(lr+,EIB);(Same-,EIB);(Same,EIB);  
(Same+,EIB);(Same,EIB);(Same-,EIB);(lr+,EIB);(lr,EIB);  
(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);  
(Opposite-,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);  
(Same+,EIB);(Same,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);  
(Opposite-,EIB);(Opposite,EIB);(Opposite+,EIB);  
(lr-,EIB);(lr,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);  
(Opposite+,EIB);(Opposite,EIB);(Opposite-,EIB);  
(rl+,EIB);(rl,EIB);(rl-,EIB);(Same+,EIB);(Same,EIB);  
(rl+,EIB);(rl,EIB);(rl-,EIB);(Opposite-,EIB);  
(Opposite,EIB);(Opposite+,EIB);(lr-,EIB);(lr,EIB);  
(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);(Opposite+,EIB);

(lr-,EIB);(lr,EIB);(lr+,EIB);(Same-,EIB);(Same,EIB);  
(Same+,EIB);(rl+,EIB);(rl,EIB);(rl+,EIB);  
(Opposite-,EIB);(Opposite,EIB);(Opposite+,EIB);  
(Opposite,EIB);(Opposite+,EIB);(lr-,EIB);(lr,EIB);  
(lr+,EIB);(Same-,EIB);(Same,EIB);(Same+,EIB);  
(Same,EIB);(Same-,EIB);(lr+,EIB);(lr,EIB)  
(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);  
(Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);  
(Same-,EIB);(Same,EIB);(Same+,EIB);(rl+,EIB)  
;(rl,EIB);(rl-,EIB);(rl,EIB);(rl+,EIB);  
(Same+,EIB);(rl+,EIB);(rl,EIB);(rl+,EIB);  
(Opposite-,EIB);(Opposite,EIB);(Opposite-,EIB);  
(rl+,EIB);(rl,EIB);(rl-,EIB);(Same+,EIB);(rl+,EIB);  
(rl,EIB);(rl+,EIB);(Same+,EIB);(Same,EIB);(Same-,EIB);  
(lr+,EIB);(lr,EIB);(lr-,EIB);(Opposite+,EIB);  
(Opposite,EIB);(Opposite-,EIB);(rl+,EIB);(rl,EIB);  
(rl+,EIB);(Same+,EIB);(Same,EIB);(Same-,EIB);(lr+,EIB);  
(lr,EIB);(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);  
(Opposite-,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);  
(Same+,EIB);(Same,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);  
(Opposite-,EIB);(Opposite,EIB);(Opposite+,EIB);  
(lr-,EIB);(lr,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);  
(Opposite+,EIB);(Opposite,EIB);(Opposite-,EIB);  
(rl+,EIB);(rl,EIB);(rl-,EIB);(Same+,EIB);(Same,EIB);  
(Same-,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);  
(Opposite+,EIB);(Opposite,EIB);(Opposite+,EIB);  
(lr-,EIB);(lr,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);  
(Opposite+,EIB);(Opposite,EIB);(Opposite+,EIB);  
(lr-,EIB);(lr,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);  
(Opposite+,EIB);(Opposite,EIB);(Opposite-,EIB);  
(rl+,EIB);(rl,EIB);(rl-,EIB);(Same+,EIB);(Same,EIB);  
(Same-,EIB);(lr+,EIB);(lr,EIB);(lr+,EIB);(lr,EIB);

(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);(Opposite-,EIB);  
 (rl+,EIB);(rl,EIB);(rl-,EIB);(Same+,EIB);(Same,EIB);  
 (rl+,EIB);(rl,EIB);(rl-,EIB);(Opposite-,EIB);  
 (Opposite,EIB);(Opposite-,EIB);(rl+,EIB);(rl,EIB);  
 (rl-,EIB);(rl,EIB);(rl+,EIB);(Opposite-,EIB);  
 (Opposite,EIB);(Opposite+,EIB);(lr-,EIB);(lr,EIB);  
 (lr+,EIB);(lr,EIB);(lr-,EIB);(Opposite+,EIB);  
 (Opposite,EIB);(Opposite+,EIB);(lr-,EIB);(lr,EIB);  
 (lr+,EIB);(lr,EIB);(lr-,EIB);(Opposite+,EIB);  
 (Opposite,EIB);(Opposite+,EIB);(lr-,EIB);(lr,EIB);  
 (lr+,EIB);(lr,EIB);(lr-,EIB);(Opposite+,EIB);  
 (Opposite,EIB);(Opposite-,EIB);(rl+,EIB);(rl,EIB);  
 (rl-,EIB);(Same+,EIB);(Same,EIB);(rl+,EIB);(rl,EIB);  
 (rl-,EIB);(Opposite-,EIB);(Opposite,EIB);(Opposite+,EOIB);  
 (lr-,ALL);(lr,EoIF);(lr+,EIF);(Same-,EIF);(Same-,EOIF);  
 (Same-,ALL);(Same-,EOIB);(lr+,EOIB);(lr,EoIB);(lr-,EOIB);  
 (Opposite+,EOIB);(Opposite,EOIB);(Opposite+,EOIB);  
 (lr-,EOIB);(lr,EoIB);(lr+,EOIB);(Same-,EOIB);(Same,EOIB);  
 (Same+,EOIB);(rl+,EOIB);(rl,EoIB);(rl-,EOIB);(rl,EOIB);  
 (rl+,EOIB);(Same+,EOIB);(Same,EOIB);(Same-,EOIB);  
 (lr+,EOIB);(lr,EoIB);(lr-,EOIB);(Opposite+,EOIB);  
 (Opposite,EOIB);(Opposite+,EOIB);(lr-,EOIB);(lr,EoIB);  
 (lr+,EOIB);(Same-,EOIB);(Same,EOIB);(Same+,EOIB);(rl+,EOIB);  
 (rl,EoIB);(rl-,EOIB);(rl,EoIB);(rl+,EOIB);(Same+,EOIB);  
 (Same,EOIB);(Same-,EOIB);(lr+,EOIB);(Same-,EOIB);  
 (lr+,EOIB);(lr,EoIB);(lr-,EOIB);(Opposite+,EOIB);  
 (Opposite,EOIB);(Opposite+,EOIB);(lr-,EOIB);(lr,EoIB);  
 (lr+,EOIB);(Same-,EOIB);(Same,EOIB);(Same+,EOIB);  
 (Same,EOIB);(Same-,EOIB);(Same,EOIB);(Same+,EOIB);  
 (rl+,EOIB);(rl,EoIB);(rl-,EOIB);(rl,EoIB);(rl+,EOIB);  
 (Opposite-,EOIB);(Opposite,EOIB);(Opposite+,EOIB);  
 (lr-,EOIB);(lr,EoIB);(lr+,EOIB);(Same-,EOIB);(Same,EOIB);



(Same+,EOIB);(r1+,EOIB);(r1,EOIB);(r1-,EOIB);(r1,EOIB);  
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 (Opposite-,EOIB);(r1+,EOIB);(r1,EOIB);(r1-,EOIB);  
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 (Opposite+,EOIB);(lr-,EOIB);(lr,EOIB);(lr+,EOIB);  
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 (Opposite+,EOIB);(Opposite,EOIB);(Opposite-,EOIB);  
 (r1+,EOIB);(r1,EOIB);(r1-,EOIB);(Same+,EOIB);(Same,EOIB);  
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; (Opposite-,EIB); (r1+,EIB); (r1,EIB); (r1-,EIB);

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(Same+,EIB);(Same,EIB);(Same-,EIB);(lr+,EIB);
(Same-,EIB);(Same,EIB);(Same+,EIB);(Same,EIB)
;(Same-,EIB);(lr+,EIB);(lr,EIB);(lr+,EIB);
(Same-,EIB);(Same,EIB);(Same+,EIB);(Same,EIB)
;(rl+,EIB);(rl,EIB);(rl-,EIB);(Opposite-,EIB)
;(Opposite,EIB);(Opposite-,EIB);(rl+,EIB)
;(rl,EIB);(rl-,EIB);(Same+,EIB);(Same,EIB)
;(rl+,EIB);(rl,EIB);(rl-,EIB);(Opposite-,EIB);
(Opposite,EIB);(Opposite-,EIB);(rl+,EIB)
;(rl,EIB);(rl-,EIB);(rl,EIB);(rl+,EIB);
(Opposite-,EIB);(Opposite,EIB);(Opposite-,EIB)
;(rl+,EIB);(rl,EIB);(rl-,EIB);(Same+,EIB)
;(Same,EIB);(Same-,EIB);(lr+,EIB);(lr,EIB)
;(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);
(Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB)
;(Same-,EIB);(Same,EIB);(Same+,EIB);(rl+,EIB)
;(rl,EIB);(rl-,EIB);(rl,EIB);(rl+,EIB);
(Opposite-,EIB);(Opposite,EIB);(Opposite-,EIB)
;(rl+,EIB);(rl,EIB);(rl-,EIB);(Same+,EIB)
;(Same,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);
(Opposite-,EIB);(Opposite,EIB);(Opposite+,EIB);
(lr-,EIB);(lr,EIB);(lr+,EIB);(Same-,EIB);
(Same,EIB);(Same+,EIB);(Same,EIB);(rl+,EIB)
;(rl,EIB);(rl-,EIB);(Opposite-,EIB);(Opposite,EIB);
(Opposite-,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);
(rl,EIB);(rl+,EIB);(Opposite-,EIB);(Opposite,EIB);
End
Begin
Event=Overtake
Object A:
(lr+,R);(lr,R);(lr-,R);(Opposite+,R);(Opposite,R);
(Opposite+,R);(lr-,R);(lr,R);(lr+,R);(lr,R);(lr-,R);

```

(Opposite+,R);(Opposite,R);(Opposite+,R);(lr-,R)  
; (lr,R);(lr+,R);(Same-,R);(Same,R);(Same+,R);  
(rl+,R);(rl,R);(rl+,R);(Same+,R);(Same,R)  
; (Same-,R);(lr+,R);(lr,R);(lr-,R);(Opposite+,R);  
(Opposite,R);(Opposite+,R);(lr-,R);(lr,R);  
(lr+,R);(Same-,R);(lr+,R);(lr,R);(lr-,R);  
(Opposite+,R);(Opposite,R);(Opposite+,R);  
(lr-,R);(lr,R);(lr+,R);(lr,R);(lr-,R);(Opposite+,R);  
(Opposite,R);(Opposite+,R);(lr-,R);(lr,R);  
(lr+,R);(lr,R);(lr-,R);(Opposite+,R);  
(Opposite,R);(Opposite+,R);(lr-,R);(lr,R);  
(lr+,R);(lr,R);(lr-,R);(lr,R);(lr+,R);  
(Same-,R);(Same,R);(Same+,R);(rl+,R);(rl,R);  
(rl-,R);(rl,R);(rl+,R);(Same+,R);(Same,R)  
(Same-,R);(lr+,R);(Same-,R);(lr+,R);(lr,R);  
(lr-,R);(Opposite+,R);(Opposite,R);(Opposite+,R)  
; (lr-,R);(lr,R);(lr+,R);(Same-,R);(Same,R)  
; (Same+,R);(rl+,R);(rl,R);(rl-,R);(rl,R);  
(rl+,R);(Same+,R);(Same,R);(Same-,R);(lr+,R);  
(lr,R);(lr-,R);(Opposite+,R);(lr-,R);(lr,R);  
(lr+,R);(Same-,R);(lr+,R);(lr,R);(lr-,R)  
; (Opposite+,R);(Opposite,R);(Opposite-,R);  
(rl+,R);(rl,R);(rl-,R);(Same+,R);(Same,R)  
; (Same-,R);(lr+,R);(Same-,R);(lr+,R);(lr,R);  
(lr-,R);(Opposite+,R);(Opposite,R);(Opposite+,R)  
; (lr-,R);(lr,R);(lr+,R);(lr,R);(lr-,R)  
; (Opposite+,R);(Opposite,R);(Opposite+,R)  
; (lr-,R);(lr,R);(lr+,R);(Same-,R);(lr+,R)  
; (lr,R);(lr-,R);(Opposite+,R);(Opposite,R)  
; (Opposite+,R);(lr-,R);(lr,R);(lr+,R);  
(Same-,R);(Same,R);(Same+,R);(Same,R);  
(Same-,R);(lr+,R);(lr,R);(lr-,R);(Opposite+,R)

; (lr-,R); (Opposite+,R); (Opposite,R);  
(Opposite-,R); (rl+,R); (rl,R); (rl-,R);  
(Same+,R); (rl+,R); (rl,R); (rl+,R); (Same+,R)  
; (Same,R); (Same-,R); (lr+,R); (lr,R); (lr-,R)  
; (Opposite+,R); (Opposite,R); (Opposite-,R);  
(rl+,R); (rl,R); (rl+,R); (Same+,R); (Same,R);  
(Same-,R); (lr+,R); (lr,R); (lr-,R); (Opposite+,R);  
(Opposite,R); (Opposite+,R); (lr-,R); (lr,R);  
(lr+,R); (Same-,R); (lr+,R); (lr,R); (lr-,R)  
(Opposite+,R); (Opposite,R); (Opposite+,R)  
; (lr-,R); (lr,R); (lr+,R); (Same-,R); (Same,R)  
; (Same+,R); (rl+,R); (rl,R); (rl-,R); (rl,R)  
; (rl+,R); (Same+,R); (Same,R); (Same-,R)  
; (lr+,R); (lr,R); (lr-,R); (lr,R); (lr+,R);  
(lr,R); (lr-,R); (Opposite+,R); (Opposite,R)  
(Opposite+,R); (lr-,R); (lr,R); (lr+,R)  
; (Same-,R); (Same,R); (Same+,R); (rl+,R);  
(rl,R); (rl-,R); (rl,R); (rl+,R); (Same+,R);  
(Same,R); (Same-,R); (lr+,R); (lr,R); (lr-,R);  
(Opposite+,R); (Opposite,R); (Opposite-,R)  
; (rl+,R); (rl,R); (rl-,R); (Same+,R); (Same,R)  
; (Same-,R); (lr+,R); (lr,R); (lr-,R); (Opposite+,R);  
(lr-,R); (lr,R); (lr+,R); (Same-,R); (lr+,R)  
; (lr,R); (lr-,R); (Opposite+,R); (Opposite,R);  
(Opposite+,R); (lr-,R); (lr,R); (lr+,R); (Same-,R)  
; (Same,R); (Same+,R); (Same,R); (Same-,R)  
; (lr+,R); (lr,R); (lr-,R); (Opposite+,R);  
(Opposite,R); (Opposite+,R); (lr-,R); (lr,R)  
; (lr+,R); (lr,R); (lr+,R); (Same-,R); (Same,R);  
(Same+,R); (Same,R); (rl+,R); (rl,R); (rl-,R);  
(Opposite-,R); (Opposite,R); (Opposite+,R);  
(lr-,R); (lr,R); (lr+,R); (lr,R); (lr-,R);

(Opposite+,R);(Opposite,R);(Opposite+,R);  
(lr-,R);(lr,R);(lr+,R);(Same-,R);(Same,R)  
;(Same+,R);(rl+,R);(rl,R);(rl-,R);(rl,R);  
(rl+,R);(Opposite-,R);(Opposite,R);  
(Opposite+,R);(lr-,R);(lr,R);(lr+,R);  
(lr,R);(lr-,R);(Opposite+,R);(Opposite,R);  
(Opposite+,R);(lr-,R);(Opposite+,R);(Opposite,R);  
(Opposite+,R);(lr-,R);(lr,R);(lr+,R);  
(Same-,R);(Same,R);(Same+,R);(Same,R);  
(rl+,R);(rl,R);(rl-,R);(Opposite-,R);  
(Opposite,R);(Opposite+,R);(lr-,R);(lr,R);  
(lr+,R);(Same-,R);(Same,R);(Same-,F&R);  
(lr+,EIF);(lr+,EOIF);(Same-,EOIF);(Same,EOIF)  
;(Same+,EOIF);(Same,EOIF);(rl+,EOIF);(rl,EOIF)  
;(rl-,EOIF);(Opposite-,EOIF);(Opposite,EOIF);  
(Opposite+,EOIF);(lr-,EOIF);(lr,EOIF);(lr+,EOIF)  
;(Same-,EOIF);(lr+,EOIF);(lr,EOIF);(lr-,EOIF)  
;(Opposite+,EOIF);(Opposite,EOIF);(Opposite-,EOIF)  
(rl+,EOIF);(rl,EOIF);(rl+,EOIF);(Same+,EOIF);  
(Same,EOIF);(Same-,EOIF);(lr+,EOIF);(lr,EOIF)  
;(lr-,EOIF);(lr,EOIF);(lr-,EOIF);(Opposite+,EOIF)  
;(Opposite,EOIF);(Opposite+,EOIF);(lr-,EOIF)  
;(lr,EOIF);(lr+,EOIF);(Same-,EOIF);(Same,EOIF)  
;(Same-,EOIF);(lr+,EOIF);(lr,EOIF);(lr-,EOIF)  
;(Opposite+,EOIF);(lr-,EOIF);(Opposite+,EOIF);  
(Opposite,EOIF);(Opposite+,EOIF);(Opposite,EOIF)  
;(Opposite+,EOIF);(Opposite,EOIF)  
;(Opposite-,EOIF);(rl+,EOIF);(rl,EOIF)  
;(rl-,EOIF);(rl,EOIF);(rl+,EOIF);(Same+,EOIF)  
;(Same,EOIF);(Same-,EOIF);(lr+,EOIF);  
(lr,EOIF);(lr-,EOIF);(lr,EOIF);(lr+,EOIF)  
;(Same-,EOIF);(Same,EOIF);(Same+,EOIF);

(Same,E0IF);(r1+,E0IF);(r1,E0IF);(r1-,E0IF);  
 (Opposite-,E0IF);(Opposite,E0IF);(Opposite+,E0IF)  
 ;(lr-,E0IF);(lr,E0IF);(lr+,E0IF);(Same-,E0IF);  
 (Same,E0IF);(Same+,E0IF);(r1+,E0IF);(r1,E0IF)  
 ;(r1-,E0IF);(r1,E0IF);(r1+,E0IF);(Opposite-,E0IF);  
 (Opposite,E0IF);(Opposite-,E0IF);(r1+,E0IF);  
 (r1,E0IF);(r1+,E0IF);(Same+,E0IF);(Same,E0IF)  
 ;(Same-,E0IF);(lr+,E0IF);(lr,E0IF);(lr-,E0IF)  
 ;(lr,E0IF);(lr+,E0IF);(Same-,E0IF);(Same,E0IF);  
 (Same+,E0IF);(Same,E0IF);(r1+,E0IF);(r1,E0IF);  
 (r1-,E0IF);(Opposite-,E0IF);(Opposite,E0IF);  
 (Opposite+,E0IF);(lr-,E0IF);(lr,E0IF);(lr+,E0IF);  
 (lr,E0IF);(lr-,E0IF);(Opposite+,E0IF);  
 (Opposite,E0IF);(Opposite+,E0IF);(lr-,E0IF)  
 ;(lr,E0IF);(lr+,E0IF);(Same-,E0IF);(Same,E0IF)  
 ;(Same+,E0IF);(r1+,E0IF);(r1,E0IF);(r1-,E0IF);  
 (r1,E0IF);(r1+,E0IF);(Opposite-,E0IF);(Opposite,E0IF);  
 (Opposite+,E0IF);(lr-,E0IF);(lr-,ALL);(lr-,E0IB);  
 (lr-,EIB);(Opposite+,EIB);(Opposite,EIB);  
 (Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB)  
 ;(lr,EIB);(lr-,EIB);(Opposite+,EIB);(Opposite,EIB)  
 ;(Opposite-,EIB);(r1+,EIB);(r1,EIB);(r1-,EIB)  
 ;(r1,EIB);(r1+,EIB);(Opposite-,EIB);  
 (Opposite,EIB);(Opposite+,EIB);(Opposite,EIB);  
 (Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);  
 (lr,EIB);(lr-,EIB);(Opposite+,EIB);(lr-,EIB)  
 ;(lr,EIB);(lr+,EIB);(Same-,EIB);(Same,EIB)  
 ;(Same+,EIB);(Same,EIB);(Same-,EIB);(lr+,EIB)  
 ;(lr,EIB);(lr-,EIB);(Opposite+,EIB);  
 (Opposite,EIB);(Opposite+,EIB);(Opposite,EIB);  
 (Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB);  
 (Same-,EIB);(Same,EIB);(Same+,EIB);(r1+,EIB);

(r1,EIB);(r1-,EIB);(r1,EIB);(r1+,EIB)  
(Opposite-,EIB);(Opposite,EIB);(Opposite+,EIB)  
;(lr-,EIB);(lr,EIB);(lr+,EIB);(lr,EIB)  
;(lr-,EIB);(Opposite+,EIB);(Opposite,EIB);  
(Opposite-,EIB);(r1+,EIB);(r1,EIB);(r1-,EIB)  
;(Same+,EIB);(r1+,EIB);(r1,EIB);(r1-,EIB);  
(r1,EIB);(r1+,EIB);(Same+,EIB);(Same,EIB);  
(Same-,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);  
(Opposite+,EIB);(Opposite,EIB);(Opposite-,EIB);  
(r1+,EIB);(r1,EIB);(r1-,EIB);(r1,EIB);(r1+,EIB)  
;(Opposite-,EIB);(Opposite,EIB);(Opposite+,EIB)  
;(lr-,EIB);(lr,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB)  
;(Opposite+,EIB);(Opposite,EIB);(Opposite+,EIB)  
;(lr-,EIB);(lr,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB)  
;(Same-,EIB);(Same,EIB);(Same+,EIB);(Same,EIB)  
;(Same-,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);  
(Opposite+,EIB);(Opposite,EIB);(Opposite+,EIB);  
(lr-,EIB);(lr,EIB);(lr+,EIB);(Same-,EIB);  
(Same,EIB);(Same+,EIB);(r1+,EIB);(r1,EIB)  
;(r1-,EIB);(r1,EIB);(r1+,EIB);(Opposite-,EIB)  
;(Opposite,EIB);(Opposite-,EIB);(r1+,EIB);  
(r1,EIB);(r1+,EIB);(Same+,EIB);(Same,EIB);  
(Same-,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB)  
;(Opposite+,EIB);(Opposite,EIB);(Opposite+,EIB)  
;(lr-,EIB);(lr,EIB);(lr+,EIB);(Same-,EIB)  
;(Same,EIB);(Same+,EIB);(r1+,EIB);(r1,EIB)  
;(r1+,EIB);(Opposite-,EIB);(Opposite,EIB);  
(Opposite-,EIB);(r1+,EIB);(r1,EIB);(r1-,EIB)  
;(Same+,EIB);(Same,EIB);(Same-,EIB);(lr+,EIB)  
;(lr,EIB);(lr-,EIB);(Opposite+,EIB);(Opposite,EIB)  
;(Opposite+,EIB);(lr-,EIB);(Opposite+,EIB);  
(Opposite,EIB);(Opposite+,EIB);(lr-,EIB);

(lr,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);  
 (Opposite+,EIB);(Opposite,EIB);(Opposite+,EIB)  
 ;(lr-,EIB);(lr,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB)  
 ;(Opposite+,EIB);(Opposite,EIB);(Opposite+,EIB)  
 ;(Opposite,EIB);(Opposite+,EIB);(lr-,EIB);(lr,EIB)  
 ;(lr+,EIB);(lr,EIB);(lr-,EIB);(Opposite+,EIB);  
 (Opposite,EIB);(Opposite+,EIB);(lr-,EIB);(lr,EIB)  
 ;(lr+,EIB);(Same-,EIB);(Same,EIB);(Same+,EIB);  
 (Same,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);(Opposite-,EIB)  
 ;(Opposite,EIB);(Opposite-,EIB);(rl+,EIB);(rl,EIB);  
 (rl-,EIB);(Same+,EIB);(Same,EIB);(Same-,EIB);  
 (lr+,EIB);(lr,EIB);(lr-,EIB);(Opposite+,EIB)  
 ;(Opposite,EIB);(Opposite+,EIB);(lr-,EIB);(lr,EIB)  
 (lr+,EIB);(lr,EIB);(lr-,EIB);(Opposite+,EIB);  
 (Opposite,EIB);(Opposite+,EIB);(lr-,EIB);(lr,EIB)  
 ;(lr+,EIB);(lr,EIB);(lr-,EIB);(Opposite+,EIB)  
 ;(Opposite,EIB);(Opposite+,EIB);(lr-,EIB);  
 (lr,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);(Opposite+,EIB)  
 (Opposite,EIB);(Opposite-,EIB);(rl+,EIB);(rl,EIB);  
 (rl-,EIB);(rl,EIB);(rl+,EIB);(Opposite-,EIB);  
 (Opposite,EIB);(Opposite+,EIB);(lr-,EIB);(lr,EIB)  
 ;(lr-,EIB);(Opposite+,EIB);(Opposite,EIB)  
 ;(Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB)  
 ;(Same-,EIB);(Same,EIB);(Same+,EIB);(Same,EIB);  
 (Same-,EIB);(lr+,EIB);(Same-,EIB);(Same,EIB);  
 (Same+,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);  
 (rl,EIB);(rl+,EIB);(Same+,EIB);(Same,EIB)  
 ;(rl+,EIB);(rl,EIB);(rl-,EIB);(Opposite-,EIB)  
 ;(Opposite,EIB);(Opposite-,EIB);(rl+,EIB)  
 ;(rl,EIB);(rl+,EIB);(Opposite-,EIB);(Opposite,EIB)  
 ;(Opposite-,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);  
 (Same+,EIB);(Same,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB)



; (Opposite-, EIB); (Opposite, EIB); (Opposite+, EIB)  
; (lr-, EIB); (lr, EIB); (lr+, EIB); (Same-, EIB);  
(Same, EIB); (Same+, EIB); (rl+, EIB); (rl, EIB)  
; (rl+, EIB); (Opposite-, EIB); (Opposite, EIB)  
(Opposite-, EIB); (rl+, EIB); (rl, EIB); (rl-, EIB)  
; (rl, EIB); (rl+, EIB); (Same+, EIB); (Same, EIB)  
; (rl+, EIB); (rl, EIB); (rl-, EIB); (Opposite-, EIB)  
; (Opposite, EIB); (Opposite+, EIB); (lr-, EIB);  
(lr, EIB); (lr+, EIB); (lr, EIB); (lr-, EIB)  
; (Opposite+, EIB); (lr-, EIB); (lr, EIB); (lr+, EIB)  
; (Same-, EIB); (Same, EIB); (Same+, EIB); (rl+, EIB)  
; (rl, EIB); (rl-, EIB); (rl, EIB); (rl+, EIB); (Opposite-, EIB);  
(Opposite, EIB); (Opposite+, EIB); (lr-, EIB); (lr, EIB);  
(lr+, EIB); (Same-, EIB); (Same, EIB); (Same+, EIB); (rl+, EIB)  
; (rl, EIB); (rl-, EIB); (rl, EIB); (rl+, EIB); (Opposite-, EIB)  
; (Opposite, EIB); (Opposite+, EIB); (lr-, EIB); (lr, EIB);  
(lr+, EIB); (lr, EIB); (lr-, EIB); (Opposite+, EIB); (Opposite, EIB)  
; (Opposite-, EIB); (rl+, EIB); (rl, EIB); (rl-, EIB); (Same+, EIB)  
; (Same, EIB); (rl+, EIB); (rl, EIB); (rl-, EIB); (Opposite-, EIB);  
(Opposite, EIB); (Opposite-, EIB); (rl+, EIB); (rl, EIB); (rl-, EIB)  
; (Same+, EIB); (Same, EIB); (Same-, EIB); (lr+, EIB); (lr, EIB)  
; (lr-, EIB); (Opposite+, EIB); (Opposite, EIB); (Opposite-, EIB);  
(rl+, EIB); (rl, EIB); (rl-, EIB); (Same+, EIB); (Same, EIB)  
; (rl+, EIB); (rl, EIB); (rl-, EIB); (Opposite-, EIB); (Opposite, EIB)  
; (Opposite+, EIB); (lr-, EIB); (lr, EIB); (lr+, EIB); (lr, EIB)  
; (lr-, EIB); (Opposite+, EIB); (Opposite, EIB); (Opposite-, EIB)  
; (rl+, EIB); (rl, EIB); (rl-, EIB); (rl, EIB); (rl+, EIB);  
(Opposite-, EIB); (Opposite, EIB); (Opposite+, EIB); (lr-, EIB)  
; (lr, EIB); (lr+, EIB); (lr, EIB); (lr-, EIB); (Opposite+, EIB)  
; (Opposite, EIB); (Opposite-, EIB); (rl+, EIB); (rl, EIB)  
; (rl-, EIB); (rl, EIB); (rl+, EIB); (Opposite-, EIB)  
; (Opposite, EIB); (Opposite+, EIB); (lr-, EIB); (lr, EIB)

```

;(lr+,EIB);(lr,EIB);(lr-,EIB);(Opposite+,EIB);
(Opposite,EIB);(Opposite-,EIB);(rl+,EIB)
;(rl,EIB);(rl-,EIB);(rl,EIB);(rl+,EIB)
;(Opposite-,EIB);(Opposite,EIB);(Opposite+,EIB)
;(Opposite,EIB);(Opposite-,EIB);(rl+,EIB)
;(rl,EIB);(rl+,EIB);(Opposite-,EIB);(Opposite,EIB);
(Opposite-,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);
(Same+,EIB);(Same,EIB);(rl+,EIB);(rl,EIB)
;(rl-,EIB);(Opposite-,EIB);(Opposite,EIB)
;(Opposite-,EIB);(rl+,EIB);(rl,EIB);(rl-,EIB);
(Same+,EIB);(Same,EIB);(rl+,EIB);(rl,EIB)
;(rl-,EIB);(Opposite-,EIB);(Opposite,EIB)
;(Opposite+,EIB);(lr-,EIB);(lr,EIB);(lr+,EIB)
;(Same-,EIB);(Same,EIB);(Same+,EIB);(Same,EIB);
(rl+,EIB);(rl,EIB);(rl-,EIB);(Opposite-,EIB);
(Opposite,EIB);(Opposite+,EIB);(lr-,EIB);(lr,EIB)
;(lr+,EIB);(lr,EIB);(lr-,EIB);(Opposite+,EIB);
(Opposite,EIB);(Opposite+,EIB);(lr-,EIB);
(lr,EIB);(lr+,EIB);(lr,EIB);(lr-,EIB);
(Opposite+,EIB);(Opposite,EIB);
End

```

## 2. Recorded Binary Motion Patterns for Four Right Overtake Videos in Recognition Using QDL Program Definition

```

Begin
Event=Overtake
Object A:
(Same-,E:SE);(lr+,E:SE);(Same-,E:SE);(Same,E:SE);(Same+,E:SE);
(Same,E:SE);(Same-,E:SE);(Same,E);(Same+,NE:E);(Same,NE:E);
(Same-,NE:E);(lr+,NE:E);(Same-,NE);(Same,NE);(Same+,NE);
(Same,NE);(Same-,NE);(Same,NE);(Same+,NE);(Same,NE);

```

(Same-, NE) ; (Same, NE) ; (Same+, NE) ; (Same, NE) ; (Same-, NE) ;  
 (Same, NE) ; (Same+, NE) ; (Same, NE) ; (Same-, NE) ; (Same, NE) ;  
 (Same+, NE) ; (Same, NE) ; (Same+, NE) ; (rl+, NE) ; (Same+, NE) ;  
 (rl+, NE) ; (Same+, NE) ; (Same, NE) ; (Same-, NE) ; (lr+, NE) ;  
 (Same-, NE) ; (Same, NE) ; (Same+, NE) ; (Same, NE) ; (Same-, NE) ;  
 (Same, NE) ; (Same+, NE) ; (Same, NE) ; (Same-, NE) ; (Same, NE) ;  
 (Same+, NE) ; (Same, NE) ; (Same-, NE) ; (lr+, NE) ; (Same-, NE) ;  
 (Same, NE) ; (Same+, NE) ; (Same, NE) ; (Same-, NE) ; (Same, NE) ;  
 (Same+, NE) ; (Same, NE) ; (Same-, NE) ; (lr+, NE) ; (Same-, NE) ;  
 (Same, NE) ; (Same+, NE) ; (Same, NE) ; (Same-, NE) ; (lr+, NE)  
 ; (Same-, NE) ; (Same, NE) ; (Same+, NE) ;

End

Begin

Event=Overtake

Object A:

(SW, Same+) ; (W:SW, Same+) ; (W, Same+) ; (W:NW, Same) ; (W, Same+) ;  
 (W:SW, Same+) ; (S, Same+) ; (S:SE, Same+) ; (SE, Same+) ;  
 (E:SE, Same+) ; (E, Same+) ; (E:NE, Same+) ; (NE, Same+) ;

End

Begin

Event=Overtake

Object A:

(Same+, NW) ; (Same+, W:NW) ; (Same, NW) ; (Same-, NW) ;  
 (Same, W:NW) ; (Same+, W:NW) ; (Same, W:NW) ; (Same-, W:NW) ;  
 (Same, W:NW) ; (Same+, W:NW) ; (Same, W:NW) ; (Same-, W:NW) ;  
 (lr+, W:NW) ; (Same-, W:NW) ; (lr+, W:NW) ; (Same-, W:NW) ;  
 (Same, W:NW) ; (Same+, W:NW) ; (Same+, W) ; (Same, W:SW) ;  
 (Same-, W:SW) ; (Same, W:SW) ; (Same+, W:SW) ; (Same, W:SW) ;  
 (Same-, W:SW) ; (Same, W:SW) ; (Same+, W:SW) ; (Same, W:SW) ;  
 (Same-, W:SW) ; (Same, W:SW) ; (Same+, W:SW) ; (Same, W:SW) ;  
 (Same-, W:SW) ; (lr+, W:SW) ; (Same-, W:SW) ; (Same, SW) ;  
 (Same+, S:SW) ; (Same+, S) ; (Same+, B:S) ; (Same+, S) ;

(Same+, S:SW); (Same+, SW); (Same+, W:SW); (Same+, SW);  
(Same+, S:SW); (Same+, S); (Same+, S:SE); (Same+, SE);  
(Same+, E:SE); (Same+, E); (Same+, E:NE); (Same, E:NE);  
(Same-, E:NE); (Same, E:NE); (Same+, E:NE); (Same, E:NE);  
(Same-, E:NE); (lr+, E:NE); (Same-, E:NE); (Same, E:NE);  
(Same+, E:NE); (rl+, E:NE); (Same+, E:NE); (Same, E:NE);  
(Same-, E:NE); (Same, E:NE); (Same+, E:NE); (rl+, E:NE);  
(Same+, E:NE); (Same, E:NE); (Same-, E:NE); (Same, E:NE);  
(Same+, E:NE); (Same, E:NE); (Same-, E:NE); (lr+, E:NE);  
(Same-, NE); (Same, NE); (Same+, NE); (Same, NE);  
(Same-, NE); (Same, NE); (Same+, NE); (rl+, NE); (rl, NE);  
(rl+, NE); (Same+, NE); (Same, NE); (Same-, NE); (Same, NE);  
(Same+, NE); (rl+, NE); (Same+, NE); (Same, NE); (Same-, NE);  
(lr+, NE); (Same-, NE); (Same, NE); (Same+, NE); (rl+, NE);  
(Same+, NE); (Same, NE); (Same-, NE); (lr+, NE); (Same-, NE);  
(Same, NE); (Same+, NE); (Same, NE); (Same-, NE);  
(lr+, NE); (Same-, NE); (Same, NE); (Same+, NE);

End

Begin

Event=Overtake

Object A:

(Same+, SE); (Same, SE); (Same-, SE); (Same, SE);  
(Same+, SE); (Same, E:SE); (Same-, E:SE);  
(lr+, E:SE); (lr, E:SE); (lr-, E:SE); (lr, E:SE);  
(lr+, E:SE); (Same-, E:SE); (Same, E:SE); (Same+, E:SE);  
(Same, E:SE); (Same-, E:SE); (Same, E:SE); (Same+, E:SE);  
(Same, E:SE); (Same-, E:SE); (Same, E:SE); (Same+, E:SE);  
(Same, E:SE); (Same-, E:SE); (Same, E:SE); (Same+, E:SE);  
(Same, E:SE); (Same-, E:SE); (Same, E:SE); (Same+, E:SE);  
(Same, E:SE); (Same-, E:SE); (lr+, E:SE); (Same-, E:SE);  
(Same, E:SE); (Same+, E:SE); (Same, E:SE); (Same-, E:SE);

(Same, E:SE); (Same+, E:SE); (r1+, E:SE); (Same+, E:SE);  
(Same, E:SE); (Same-, E:SE); (Same, E:SE); (Same+, E:SE);  
(Same, E:SE); (Same-, E:SE); (Same, E:SE); (Same+, E:SE);  
(r1+, E:SE); (Same+, E:SE); (Same, E); (Same-, E:NE);  
(Same, E:NE); (Same+, E:NE); (Same, E:NE);  
(Same-, E:NE); (lr+, E:NE); (Same-, E:NE);  
(Same, E:NE); (Same+, E:NE); (Same, E:NE);  
(Same-, E:NE); (Same, E:NE); (Same+, E:NE);  
(Same, E:NE); (Same-, E:NE); (Same, E:NE);  
(Same+, E:NE); (Same, E:NE); (Same+, E:NE);  
(Same, E:NE); (Same-, E:NE); (Same, E:NE);  
(Same+, E:NE); (Same, E:NE); (Same-, E:NE);  
(Same, E:NE); (Same+, E:NE); (r1+, E:NE);  
(Same+, E:NE); (Same, E:NE); (Same-, E:NE);  
(Same, E:NE); (Same+, E:NE); (r1+, E:NE);  
(Same+, E:NE); (Same, E:NE); (Same-, E:NE);  
(Same, E:NE); (Same+, E:NE); (r1+, E:NE);  
(Same+, E:NE); (Same, E:NE); (Same-, E:NE);  
(Same, E:NE); (Same+, E:NE); (Same, E:NE);  
(Same-, E:NE); (lr+, E:NE);

End

### 3. Recorded Binary Motion Patterns in Two Left Overtake and Two Right Overtake Videos using QDL Program Definition

## Appendix D

(1)

Begin

Event=Overtake

Object A:

(Same+, W:NW);(Same, W);(Same-,W);(Same, W:SW);  
(Same+, W:SW);(rl+,W:SW);(Same+,W);(Same,W);  
(Same-,W);(lr+, W);(Same-,W:SW);(Same, W:SW);  
(Same+, W:SW);(rl+,W:SW);(Same+,W);(Same,W);  
(Same-,W);(Same, W:SW);(Same+,W:SW);(Same,W);  
(Same-,W:NW);(Same, W:NW);(Same+, W:NW);  
(Same, W:NW);(Same-,W:NW);(Same,W:NW);  
(Same+, W:NW);(Same,W:NW);(Same-,W:NW);  
(Same, W:NW);(Same+,W:NW);(Same, W:NW);  
(Same-,W:NW);(lr+, W:NW);(Same-,W:NW);(Same, W:NW);  
(Same+, W:NW);(Same, W:NW);(Same-,W:NW);(Same-,NW);  
(lr+, NW);(Same-,NW);(Same, NW);(Same+, NW);(Same, NW);  
(Same-,NW);(Same, NW);(Same+, NW);(Same, NW);  
(Same-,NW);(Same, NW);(Same+, NW);(Same, NW);  
(Same-,NW);(lr+, NW);(Same-,NW);(Same, NW);  
(Same+, NW) ;(Same, NW);(Same-,NW);(Same, NW);  
(Same+, NW);(Same, NW) ;( Same-, NW) ;(lr+, NW);  
End

## Appendix D

(2)

Begin

Event=Overtake

Object A:

(Same+, W:SW);(Same, W:SW);(Same-, W:SW);(Same, W:SW);  
(Same+, W:SW);(Same, W:SW);(Same-, W:SW);(Same, W:SW);  
(Same+, W:SW);(Same, W:SW);(Same-, W:SW);(Same, W:SW);  
(Same+, W:SW);(Same, W:SW);(Same-, W:SW);(lr+, W:SW);  
(Same-, W:SW);(Same, W:SW);(Same+, W:SW);(Same, W:SW);  
(Same-, W:SW);(lr+, W:SW);(Same-, W:SW);(Same, W:SW);  
(Same+, W:SW);(Same, W:SW);(Same-, W:SW);(Same, W:SW);  
(Same+, W:SW);(rl+, W:SW);(Same+, W:SW);(Same, W:SW);  
(Same-, W:SW);(lr+, W:SW);(Same-, W:SW);(Same, W:SW);  
(Same+, W:SW);(Same, W);(Same-, W:NW);(lr+, W:NW);  
(Same-, W:NW);(Same, W:NW);(Same+, W:NW);  
(rl+, W:NW);(Same+, W:NW);(Same, W:NW);(Same-, W:NW);  
(lr+, W:NW);(Same-, W:NW);(Same, W:NW);(Same+, W:NW);  
(Same, W:NW);(Same-, W:NW);(lr+, W:NW);(Same-, W:NW);  
(Same, W:NW);(Same+, W:NW);(Same, W:NW);(Same-, W:NW);  
(Same, W:NW);(Same+, W:NW);(rl+, W:NW);(Same+, W:NW);  
(Same, W:NW);(Same-, W:NW);(Same, W:NW);(Same+, W:NW);  
(Same, W:NW);(Same-, W:NW);(Same, W:NW);(Same+, W:NW);  
(rl+, NW);(Same+, NW);(Same, NW);(Same-, NW);(lr+, NW);  
(Same-, NW);(Same, NW);(Same+, NW);(Same, NW);(Same-, NW);  
(Same, NW);(Same+, NW);(rl+, NW);(Same+, NW);(Same, NW);  
(Same-, NW);(Same, NW);(Same+, NW);(Same, NW);(Same-, NW);  
(lr+, NW);(Same-, NW);(Same, NW);(Same+, NW);(Same, NW);  
(Same-, NW);(lr+, NW);(Same-, NW);(Same, NW);(Same+, NW);  
(Same, NW);(Same-, NW);(lr+, NW);(Same-, NW);(Same, NW);  
(Same+, NW);(Same, NW);(Same-, NW);(lr+, NW);(Same-, NW);  
(Same, NW);(Same+, NW);(Same, NW);(Same-, NW);(Same, NW);  
(Same+, NW);

End

## Appendix D

(3)

Begin

Event=Overtake

Object A:

(Same+, NW);(Same+, W:NW);(Same, NW);(Same-,NW);  
(Same, W:NW);(Same+, W:NW);(Same, W:NW);(Same-,W:NW);  
(Same, W:NW);(Same+, W:NW);(Same, W:NW);(Same-,W:NW);  
(lr+, W:NW);(Same-,W:NW);(lr+, W:NW);(Same-,W:NW);  
(Same, W:NW);(Same+, W:NW);(Same+, W);(Same, W:SW);  
(Same-,W:SW);(Same, W:SW);(Same+, W:SW);(Same, W:SW);  
(Same-,W:SW);(Same, W:SW);(Same+, W:SW);(Same, W:SW);  
(Same-,W:SW);(Same, W:SW);(Same+, W:SW);(Same, W:SW);  
(Same-,W:SW);(lr+, W:SW);(Same-,W:SW);(Same, SW);  
(Same+, S:SW);(Same+, S);(Same+, B:S);(Same+, S);  
(Same+, S:SW);(Same+, SW);(Same+, W:SW);(Same+,SW);  
(Same+, S:SW);(Same+,S);(Same+,S:SE);(Same+,SE);  
(Same+, E:SE);(Same+,E);(Same+, E:NE);(Same, E:NE);  
(Same-,E:NE);(Same, E:NE);(Same+, E:NE);(Same, E:NE);  
(Same-,E:NE);(lr+, E:NE);(Same-,E:NE);(Same, E:NE);  
(Same+, E:NE);(rl+, E:NE);(Same+, E:NE);(Same, E:NE);  
(Same-,E:NE);(Same, E:NE);(Same+, E:NE);(rl+, E:NE);  
(Same+, E:NE);(Same, E:NE);(Same-,E:NE);(Same, E:NE);  
(Same+, E:NE);(Same, E:NE);(Same-,E:NE);(lr+, E:NE);  
(Same-,NE);(Same, NE);(Same+, NE);(Same, NE);  
(Same-, NE);(Same, NE);(Same+, NE);(rl+, NE);(rl, NE);  
(rl+, NE);(Same+, NE);(Same, NE);(Same-,NE);(Same, NE);  
(Same+, NE);(rl+, NE);(Same+, NE);(Same, NE);(Same-,NE);  
(lr+, NE);(Same-,NE);(Same, NE);(Same+, NE);(rl+, NE);(Same+, NE);  
(Same, NE);(Same-,NE);(lr+, NE);(Same-, NE);(Same, NE);(Same+, NE);  
(Same, NE);(Same-,NE);(lr+, NE);(Same-,NE);(Same, NE);(Same+, NE);  
End



## Appendix D

(4)

**Begin**

**Event=Overtake**

**Object A:**

(Same+, SE);(Same, SE);(Same-,SE);(Same, SE);(Same+, SE);  
(Same, E:SE);(Same-,E:SE);(lr+,E:SE);(lr,E:SE);(lr-,E:SE);  
(lr,E:SE);(lr+,E:SE);(Same-,E:SE);(Same,E:SE);(Same+,E:SE);  
(Same,E:SE);(Same-,E:SE);(Same,E:SE);(Same+,E:SE);  
(Same,E:SE);(Same-,E:SE);(Same,E:SE);(Same+,E:SE);  
(Same,E:SE);(Same-,E:SE);(Same,E:SE);(Same+,E:SE);  
(Same,E:SE);(Same-,E:SE);(Same,E:SE);(Same+,E:SE);  
(Same,E:SE);(Same-,E:SE);(lr+,E:SE);(Same-,E:SE);  
(Same,E:SE);(Same+,E:SE);(Same,E:SE);(Same-,E:SE);  
(Same,E:SE);(Same+,E:SE);(rl+,E:SE);(Same+,E:SE);  
(Same,E:SE);(Same-,E:SE);(Same,E:SE);(Same+,E:SE);  
(Same,E:SE);(Same-,E:SE);(Same,E:SE);(Same+,E:SE);  
(rl+, E:SE);(Same+,E:SE);(Same,E);(Same-,E:NE);(Same,E:NE);  
(Same+, E:NE);(Same, E:NE);(Same-,E:NE);(lr+, E:NE);  
(Same-,E:NE);(Same, E:NE);(Same+, E:NE);(Same, E:NE);  
(Same-,E:NE);(Same, E:NE);(Same+, E:NE);(Same, E:NE);  
(Same-,E:NE);(Same, E:NE);(Same+, E:NE);(Same, E:NE);  
(Same+, E:NE);(Same, E:NE);(Same-,E:NE);(Same, E:NE);  
(Same+, E:NE);(rl+, E:NE);(Same+, E:NE);(Same, E:NE);  
(Same-,E:NE);(Same, E:NE);(Same+, E:NE);(rl+, E:NE);  
(Same+, E:NE);(Same, E:NE);(Same-,E:NE);(Same, E:NE);  
(Same+, E:NE);(rl+, E:NE);(Same+, E:NE);(Same, E:NE);  
(Same-,E:NE);(Same, E:NE);(Same+, E:NE);(Same, E:NE);  
(Same-, E:NE);(lr+, E:NE);

**End**

# Appendix E

## Cognitive Analysis of Example in Figure 1.1 in Chapter 1

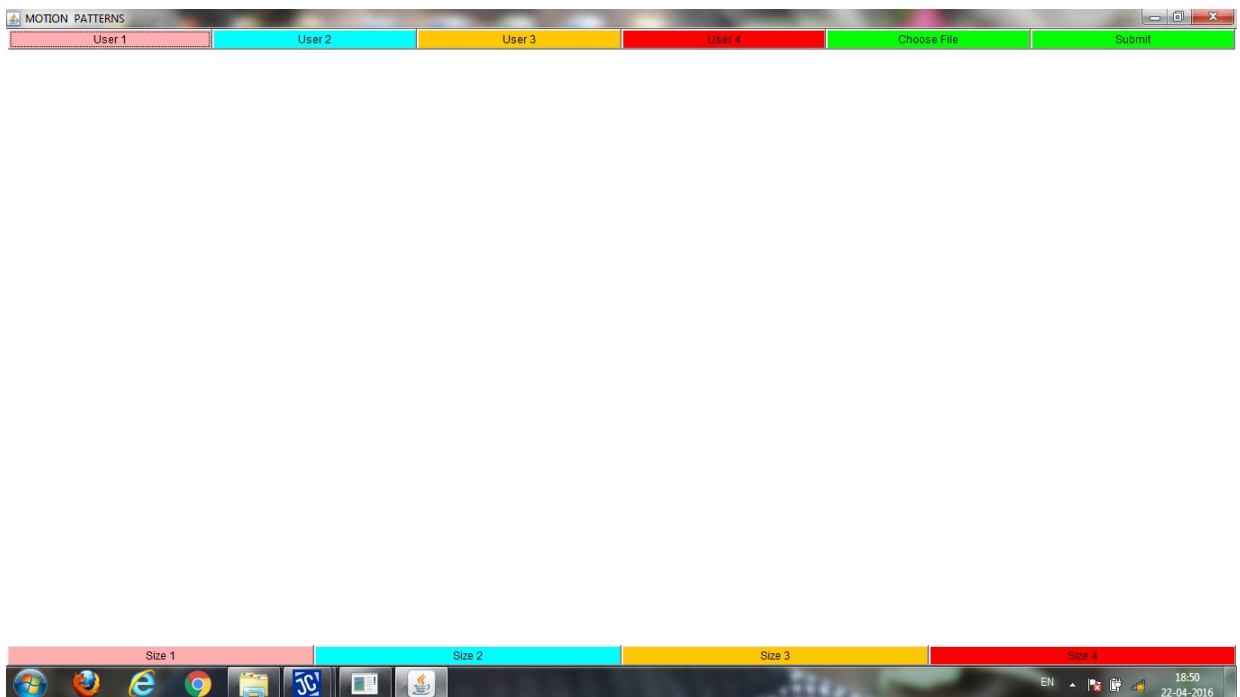


Figure E.1: User Interface for Cognitive Input

An application was developed to perform an analysis of the example presented in Figure 1.1 of Chapter 1. The example video was shown to a group of twenty persons. They were asked to provide a cognitive description of the event.

The user interface of the application is shown in Figure E.1. Positions of objects can be specified by rectangles of different colours and sizes. Each person

provided his/her cognitive input by specifying the positions of the rectangles. They indicated that the whole interpretation depends on the direction from which the video is taken. A single camera has been used and the whole event gets an interpretation from the point of the view of the person whose back is towards the camera. Others too see the event as per the perception of this person. From this viewpoint, the cognitive interpretation is that of a person coming from opposite and two persons trying to cross from left and also from right. This was agreed by seventeen out of them.