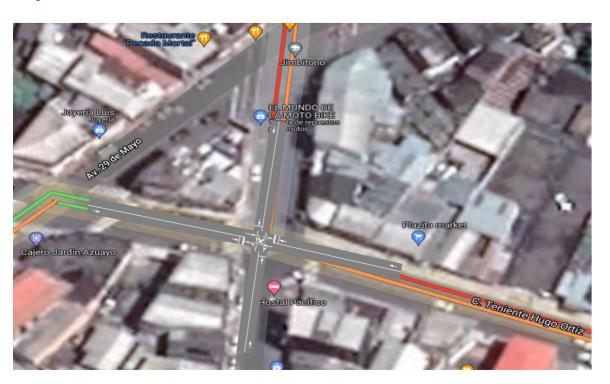
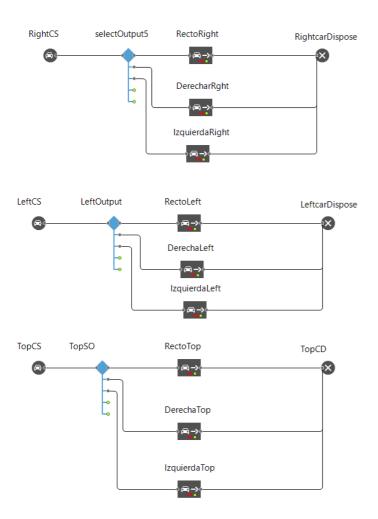
Model: MacasModel

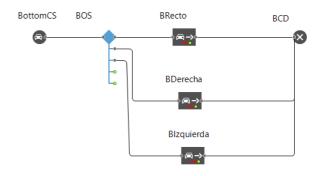
| Name | Value |
|-------------------------------|--------------------------------------------------------|
| General | |
| Model time units | hours |
| System Dynamics solver | |
| Differention Equations Method | Euler |
| Algebraic Equations Method | Modified Newton |
| Mixed Equations Method | RK45+Newton |
| Absolute accuracy | 1.0E-5 |
| Time accuracy | 1.0E-5 |
| Relative accuracy | 1.0E-5 |
| Fixed time step | 0.001 |
| Advanced | |
| Java package name | macasmodel |
| File Name | C:\Users\Alex Reinoso\Models\MacasModel\MacasModel.alp |

Agent Type: Main

| Name | Value | |
|------------------------------------------|------------------------------|--|
| Agent in flowcharts | | |
| Use in flowcharts as | Agent | |
| Dimensions and movement | | |
| Speed | (10 : MPS) | |
| Rotate animation towards movement | true | |
| Rotate vertically as well (along Z-axis) | false | |
| Space and network | | |
| Space Type | Continuous | |
| Advanced Java | | |
| Generic | false | |
| Advanced | | |
| Logging | true | |
| Auto-create datasets | true | |
| AOC_DATASETS_UPDATE_TIME_PR OPERTIES | - Recurring Event Properties | |
| Limit the number of data samples | false | |







Scale: scale

| Name | Value | |
|-------------------|---------------------|--|
| General | | |
| Unit | meters | |
| Scale | 25.0 | |
| Туре | Defined graphically | |
| Length, pixels | 100.0 | |
| Show at runtime | false | |
| Lock | false | |
| Public | false | |
| Position and size | | |
| х | 0.0 | |
| У | -150.0 | |
| Rotation | 0.0 | |

CarSource: RightCS

| Name | Value | |
|--------------------------------|----------------------------------|--|
| General | | |
| Population of agents | false | |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] | |
| Population of agents | false | |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] | |
| Show name | true | |
| Initial location | | |
| Place agent(s) | at the agent animation location | |
| Advanced | | |
| Show at runtime | true | |
| Public | false | |
| Logging | true | |

| Name | Value |
|------------------------------|-------------------|
| Arrivals defined by | self.RATE |
| Arrival rate | 23 |
| Set agent parameters from DB | false |
| Limited number of arrivals | false |
| Appears | self.ON_ROAD |
| Road | CHUGO2 |
| Enters | self.FORWARD_LANE |
| Random lane | true |
| New car | new Agent() |
| Length | 5 |
| Initial speed | 60 |
| Preferred speed | 60 |
| Max acceleration | 1.8 |
| Max deceleration | 4.2 |
| Add cars to: | false |

CarDispose: RightcarDispose

| Name | Value | |
|--------------------------------|----------------------------------|--|
| General | | |
| Population of agents | false | |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] | |
| Population of agents | false | |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] | |
| Show name | true | |
| Initial location | | |
| Place agent(s) | at the agent animation location | |
| Advanced | | |
| Show at runtime | true | |
| Public | false | |
| Logging | true | |

CarMoveTo: RectoRight

| Name | Value | |
|--------------------------------|----------------------------------|--|
| General | | |
| Population of agents | false | |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] | |
| Population of agents | false | |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] | |
| Show name | true | |
| Initial location | | |
| Place agent(s) | at the agent animation location | |
| Advanced | | |
| Show at runtime | true | |
| Public | false | |
| Logging | true | |

Agent Parameters:

| Name | Value |
|-------------|---------------------------|
| Moves to | self.ROAD |
| Road | Chugo1 |
| Destination | self.END_OF_BACKWARD_LANE |

CarMoveTo: DerecharRght

| Name | Value |
|--------------------------------|----------------------------------|
| General | |
| Population of agents | false |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] |
| Population of agents | false |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] |
| Show name | true |
| Initial location | |
| Place agent(s) | at the agent animation location |
| Advanced | |

| Name | Value |
|-----------------|-------|
| Show at runtime | true |
| Public | false |
| Logging | true |

| Name | Value |
|-------------|---------------------------|
| Moves to | self.ROAD |
| Road | Amazonas1 |
| Destination | self.END_OF_BACKWARD_LANE |

CarMoveTo: IzquierdaRight

| Name | Value | |
|--------------------------------|----------------------------------|--|
| General | | |
| Population of agents | false | |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] | |
| Population of agents | false | |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] | |
| Show name | true | |
| Initial location | | |
| Place agent(s) | at the agent animation location | |
| Advanced | | |
| Show at runtime | true | |
| Public | false | |
| Logging | true | |

Agent Parameters:

| Name | Value |
|-------------|---------------------------|
| Moves to | self.ROAD |
| Road | Amazonas2 |
| Destination | self.END_OF_BACKWARD_LANE |

SelectOutput5: selectOutput5

| Name | Value |
|--------------------------------|----------------------------------|
| General | |
| Population of agents | false |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] |
| Population of agents | false |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] |
| Show name | true |
| Initial location | |
| Place agent(s) | at the agent animation location |
| Advanced | |
| Show at runtime | true |
| Public | false |
| Logging | true |

| Name | Value |
|------|-------|
|------|-------|

| Name | Value |
|---------------|-------------------------|
| Use: | self.TYPE_PROBABILITIES |
| Probability 1 | 0.50 |
| Probability 2 | 0.25 |
| Probability 3 | 0.25 |
| Probability 4 | 0 |
| Probability 5 | 0 |

CarSource: LeftCS

| Name | Value |
|--------------------------------|----------------------------------|
| General | |
| Population of agents | false |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] |
| Population of agents | false |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] |
| Show name | true |
| Initial location | |
| Place agent(s) | at the agent animation location |
| Advanced | |
| Show at runtime | true |
| Public | false |
| Logging | true |

Agent Parameters:

| = | |
|------------------------------|-------------------|
| Name | Value |
| Arrivals defined by | self.RATE |
| Arrival rate | 1000 |
| Set agent parameters from DB | false |
| Limited number of arrivals | false |
| Appears | self.ON_ROAD |
| Road | Chugo1 |
| Enters | self.FORWARD_LANE |
| Random lane | true |
| New car | new Agent() |
| Length | 5 |
| Initial speed | 60 |
| Preferred speed | 60 |
| Max acceleration | 1.8 |
| Max deceleration | 4.2 |
| Add cars to: | false |
| | |

CarDispose: LeftcarDispose

| Name | Value |
|--------------------------------|----------------------------------|
| General | |
| Population of agents | false |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] |
| Population of agents | false |

| Name | Value |
|--------------------------------|----------------------------------|
| Generic Parameters Substitutes | [Generic Parameter Substitute:] |
| Show name | true |
| Initial location | |
| Place agent(s) | at the agent animation location |
| Advanced | |
| Show at runtime | true |
| Public | false |
| Logging | true |

CarMoveTo: RectoLeft

| Name | Value |
|--------------------------------|----------------------------------|
| General | |
| Population of agents | false |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] |
| Population of agents | false |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] |
| Show name | true |
| Initial location | |
| Place agent(s) | at the agent animation location |
| Advanced | |
| Show at runtime | true |
| Public | false |
| Logging | true |

Agent Parameters:

| Name | Value |
|-------------|---------------------------|
| Moves to | self.ROAD |
| Road | CHUGO2 |
| Destination | self.END_OF_BACKWARD_LANE |

CarMoveTo: DerechaLeft

| Name | Value |
|--------------------------------|----------------------------------|
| General | |
| Population of agents | false |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] |
| Population of agents | false |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] |
| Show name | true |
| Initial location | |
| Place agent(s) | at the agent animation location |
| Advanced | |
| Show at runtime | true |
| Public | false |
| Logging | true |

| N | ame | Value |
|---|-------|-------|
| | arrio | Value |

| Name | Value |
|-------------|---------------------------|
| Moves to | self.ROAD |
| Road | Amazonas2 |
| Destination | self.END_OF_BACKWARD_LANE |

CarMoveTo: IzquierdaLeft

| Name | Value |
|--------------------------------|----------------------------------|
| General | |
| Population of agents | false |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] |
| Population of agents | false |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] |
| Show name | true |
| Initial location | |
| Place agent(s) | at the agent animation location |
| Advanced | |
| Show at runtime | true |
| Public | false |
| Logging | true |

Agent Parameters:

| Name | Value |
|-------------|---------------------------|
| Moves to | self.ROAD |
| Road | Amazonas1 |
| Destination | self.END_OF_BACKWARD_LANE |

SelectOutput5: LeftOutput

| Name | Value |
|--------------------------------|----------------------------------|
| General | |
| Population of agents | false |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] |
| Population of agents | false |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] |
| Show name | true |
| Initial location | |
| Place agent(s) | at the agent animation location |
| Advanced | |
| Show at runtime | true |
| Public | false |
| Logging | true |

| Name | Value |
|---------------|-------------------------|
| Use: | self.TYPE_PROBABILITIES |
| Probability 1 | 0.5 |
| Probability 2 | 0.25 |
| Probability 3 | 0.25 |

| Name | Value |
|---------------|-------|
| Probability 4 | 0 |
| Probability 5 | 0 |

CarSource: TopCS

| Name | Value |
|--------------------------------|----------------------------------|
| General | |
| Population of agents | false |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] |
| Population of agents | false |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] |
| Show name | true |
| Initial location | |
| Place agent(s) | at the agent animation location |
| Advanced | |
| Show at runtime | true |
| Public | false |
| Logging | true |

Agent Parameters:

| Name | Value |
|------------------------------|-------------------|
| Arrivals defined by | self.RATE |
| Arrival rate | 1000 |
| Set agent parameters from DB | false |
| Limited number of arrivals | false |
| Appears | self.ON_ROAD |
| Road | Amazonas1 |
| Enters | self.FORWARD_LANE |
| Random lane | true |
| New car | new Agent() |
| Length | 5 |
| Initial speed | 60 |
| Preferred speed | 60 |
| Max acceleration | 1.8 |
| Max deceleration | 4.2 |
| Add cars to: | false |

CarMoveTo: RectoTop

| Name | Value |
|--------------------------------|----------------------------------|
| General | |
| Population of agents | false |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] |
| Population of agents | false |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] |
| Show name | true |
| Initial location | |
| Place agent(s) | at the agent animation location |

| Name | Value | |
|-----------------|-------|--|
| Advanced | | |
| Show at runtime | true | |
| Public | false | |
| Logging | true | |

| Name | Value |
|-------------|---------------------------|
| Moves to | self.ROAD |
| Road | Amazonas2 |
| Destination | self.END_OF_BACKWARD_LANE |

CarMoveTo: DerechaTop

| Name | Value |
|--------------------------------|----------------------------------|
| General | |
| Population of agents | false |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] |
| Population of agents | false |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] |
| Show name | true |
| Initial location | |
| Place agent(s) | at the agent animation location |
| Advanced | |
| Show at runtime | true |
| Public | false |
| Logging | true |

Agent Parameters:

| Name | Value |
|-------------|---------------------------|
| Moves to | self.ROAD |
| Road | Chugo1 |
| Destination | self.END_OF_BACKWARD_LANE |

CarMoveTo: IzquierdaTop

| Name | Value |
|--------------------------------|----------------------------------|
| General | |
| Population of agents | false |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] |
| Population of agents | false |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] |
| Show name | true |
| Initial location | |
| Place agent(s) | at the agent animation location |
| Advanced | |
| Show at runtime | true |
| Public | false |
| Logging | true |

| Name | Value |
|-------------|---------------------------|
| Moves to | self.ROAD |
| Road | CHUGO2 |
| Destination | self.END_OF_BACKWARD_LANE |

CarDispose: TopCD

| Name | Value |
|--------------------------------|----------------------------------|
| General | |
| Population of agents | false |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] |
| Population of agents | false |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] |
| Show name | true |
| Initial location | |
| Place agent(s) | at the agent animation location |
| Advanced | |
| Show at runtime | true |
| Public | false |
| Logging | true |

SelectOutput5: TopSO

| Name | Value |
|--------------------------------|----------------------------------|
| General | |
| Population of agents | false |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] |
| Population of agents | false |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] |
| Show name | true |
| Initial location | |
| Place agent(s) | at the agent animation location |
| Advanced | |
| Show at runtime | true |
| Public | false |
| Logging | true |

Agent Parameters:

| Name | Value |
|---------------|-------------------------|
| Use: | self.TYPE_PROBABILITIES |
| Probability 1 | 0.25 |
| Probability 2 | 0.50 |
| Probability 3 | 0.25 |
| Probability 4 | 0 |
| Probability 5 | 0 |

CarSource: BottomCS

| Name | Value | |
|------|-------|--|
| | | |

| Name | Value |
|--------------------------------|----------------------------------|
| General | |
| Population of agents | false |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] |
| Population of agents | false |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] |
| Show name | true |
| Initial location | |
| Place agent(s) | at the agent animation location |
| Advanced | |
| Show at runtime | true |
| Public | false |
| Logging | true |

| Name | Value |
|------------------------------|-------------------|
| Arrivals defined by | self.RATE |
| Arrival rate | 1000 |
| Set agent parameters from DB | false |
| Limited number of arrivals | false |
| Appears | self.ON_ROAD |
| Road | Amazonas2 |
| Enters | self.FORWARD_LANE |
| Random lane | true |
| New car | new Agent() |
| Length | 5 |
| Initial speed | 60 |
| Preferred speed | 60 |
| Max acceleration | 1.8 |
| Max deceleration | 4.2 |
| Add cars to: | false |

CarMoveTo: BRecto

| Name | Value |
|--------------------------------|----------------------------------|
| General | |
| Population of agents | false |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] |
| Population of agents | false |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] |
| Show name | true |
| Initial location | |
| Place agent(s) | at the agent animation location |
| Advanced | |
| Show at runtime | true |
| Public | false |
| Logging | true |

| Name | Value | |
|------|-------|--|
| | | |

| Name | Value |
|-------------|---------------------------|
| Moves to | self.ROAD |
| Road | Amazonas1 |
| Destination | self.END_OF_BACKWARD_LANE |

CarMoveTo: BDerecha

| Name | Value |
|--------------------------------|----------------------------------|
| General | |
| Population of agents | false |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] |
| Population of agents | false |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] |
| Show name | true |
| Initial location | |
| Place agent(s) | at the agent animation location |
| Advanced | |
| Show at runtime | true |
| Public | false |
| Logging | true |

Agent Parameters:

| Name | Value |
|-------------|---------------------------|
| Moves to | self.ROAD |
| Road | CHUGO2 |
| Destination | self.END_OF_BACKWARD_LANE |

CarMoveTo: Blzquierda

| Name | Value |
|--------------------------------|----------------------------------|
| General | |
| Population of agents | false |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] |
| Population of agents | false |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] |
| Show name | true |
| Initial location | |
| Place agent(s) | at the agent animation location |
| Advanced | |
| Show at runtime | true |
| Public | false |
| Logging | true |

| Name | Value |
|-------------|---------------------------|
| Moves to | self.ROAD |
| Road | Chugo1 |
| Destination | self.END_OF_BACKWARD_LANE |

CarDispose: BCD

| Name | Value |
|--------------------------------|----------------------------------|
| General | |
| Population of agents | false |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] |
| Population of agents | false |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] |
| Show name | true |
| Initial location | |
| Place agent(s) | at the agent animation location |
| Advanced | |
| Show at runtime | true |
| Public | false |
| Logging | true |

SelectOutput5: BOS

| Name | Value |
|--------------------------------|----------------------------------|
| General | |
| Population of agents | false |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] |
| Population of agents | false |
| Generic Parameters Substitutes | [Generic Parameter Substitute:] |
| Show name | true |
| Initial location | |
| Place agent(s) | at the agent animation location |
| Advanced | |
| Show at runtime | true |
| Public | false |
| Logging | true |

Agent Parameters:

| Name | Value |
|---------------|-------------------------|
| Use: | self.TYPE_PROBABILITIES |
| Probability 1 | 0.50 |
| Probability 2 | 0.25 |
| Probability 3 | 0.25 |
| Probability 4 | 0 |
| Probability 5 | 0 |

Image: image

| Name | Value |
|-----------------|-------|
| General | |
| Show at runtime | true |
| Lock | true |
| Embedded icon | false |
| Public | true |

| Name | Value |
|-------------------|-----------|
| Position and size | |
| х | 0.0 |
| Width | 1000.0 |
| у | 0.0 |
| Height | 600.0 |
| z | 0.0 |
| Rotation | 0.0 |
| Advanced | |
| Show in | 2D and 3D |
| Show name | false |

Simulation Experiment: Simulation

| Name | Value |
|----------------------------------|-------------------------------------------|
| General | |
| Bypass Initial Simulation Screen | true |
| Maximum available memory | 512 |
| Agent type | Main |
| Model time | |
| Execution mode | Real time with scale |
| Real time scale | 1.0 |
| Stop option | Never |
| Initial time | 0.0 |
| Initial date | Wed Oct 27 00:00:00 GMT 2021 |
| Randomness | |
| Random Number Generation Type | Fixed seed (reproducible simulation runs) |
| Seed value | 1 |
| Window | |
| Title | MacasModel : Simulation |
| Enable zoom and panning | true |
| Enable developer panel | true |
| Show developer panel on start | false |
| Advanced | |
| Load root from snapshot | false |

MacasModel

Text: text

| Name | Value |
|-----------------|------------|
| General | |
| Show at runtime | true |
| Lock | false |
| Text | |
| Text | MacasModel |
| Appearance | |
| Color | royalBlue |

| Name | Value |
|-------------------|-------|
| Alignment | LEFT |
| Position and size | |
| х | 50.0 |
| У | 30.0 |
| z | 0.0 |
| Rotation | 0.0 |
| Advanced | |
| Show name | false |