

R2020a Highlights

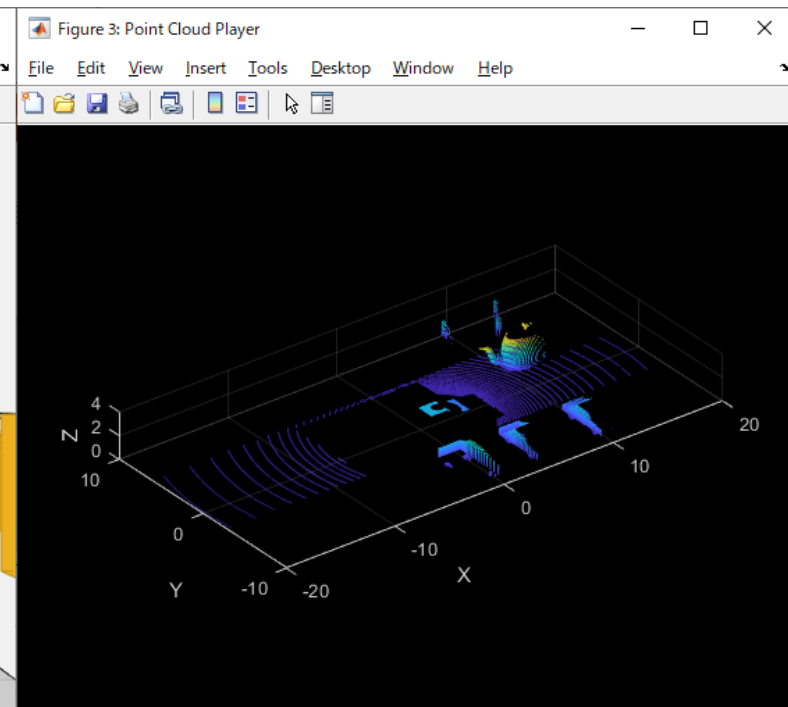
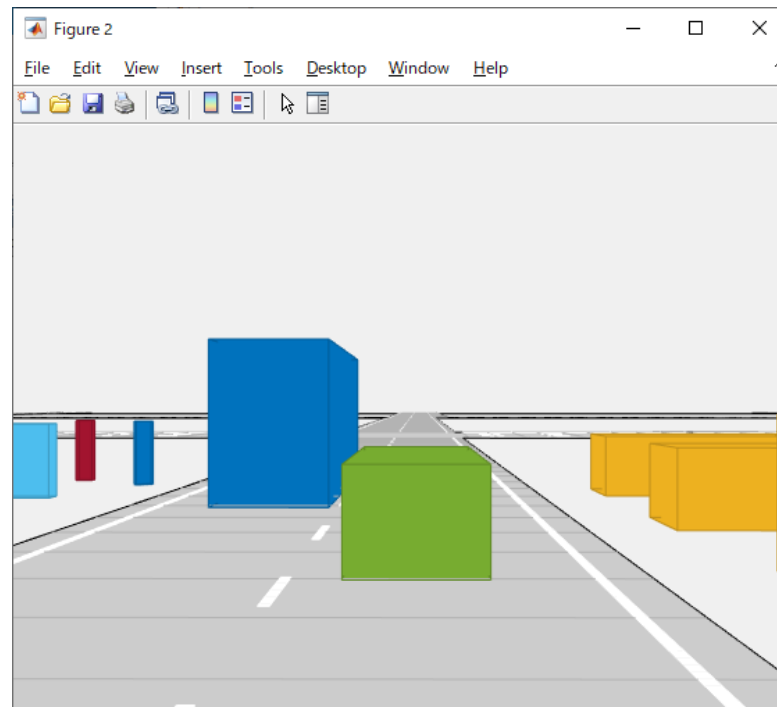
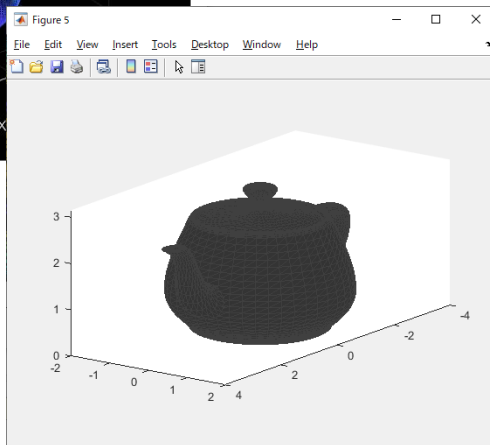
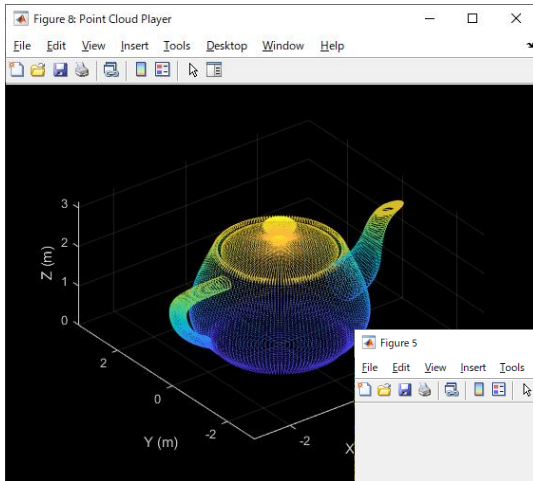
Automated Driving

LiDARセンサーモデル：各アクターに対する点群メッシュ指定

R2020a

Automated Driving Toolbox

```
[verts, faces, cindex] = teapotGeometry;  
tmp = [faces(:,1) faces(:,3:4)];  
faces = [faces(:,1:3); tmp];  
figure,  
p =  
patch('Faces', faces, 'Vertices', verts, 'FaceVertexCData', cindex, 'FaceColor', 'interp');  
  
myTeaMesh = extendedObjectMesh(verts, faces);
```

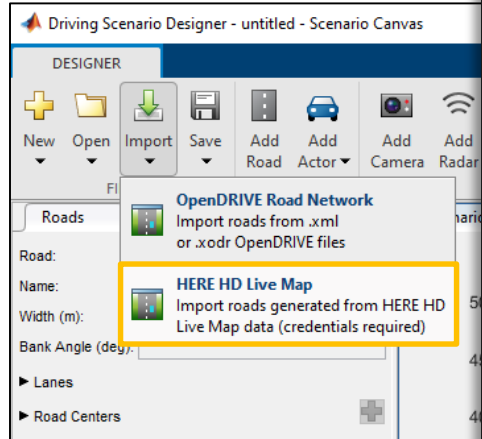


HERE HD Live Map のインポート

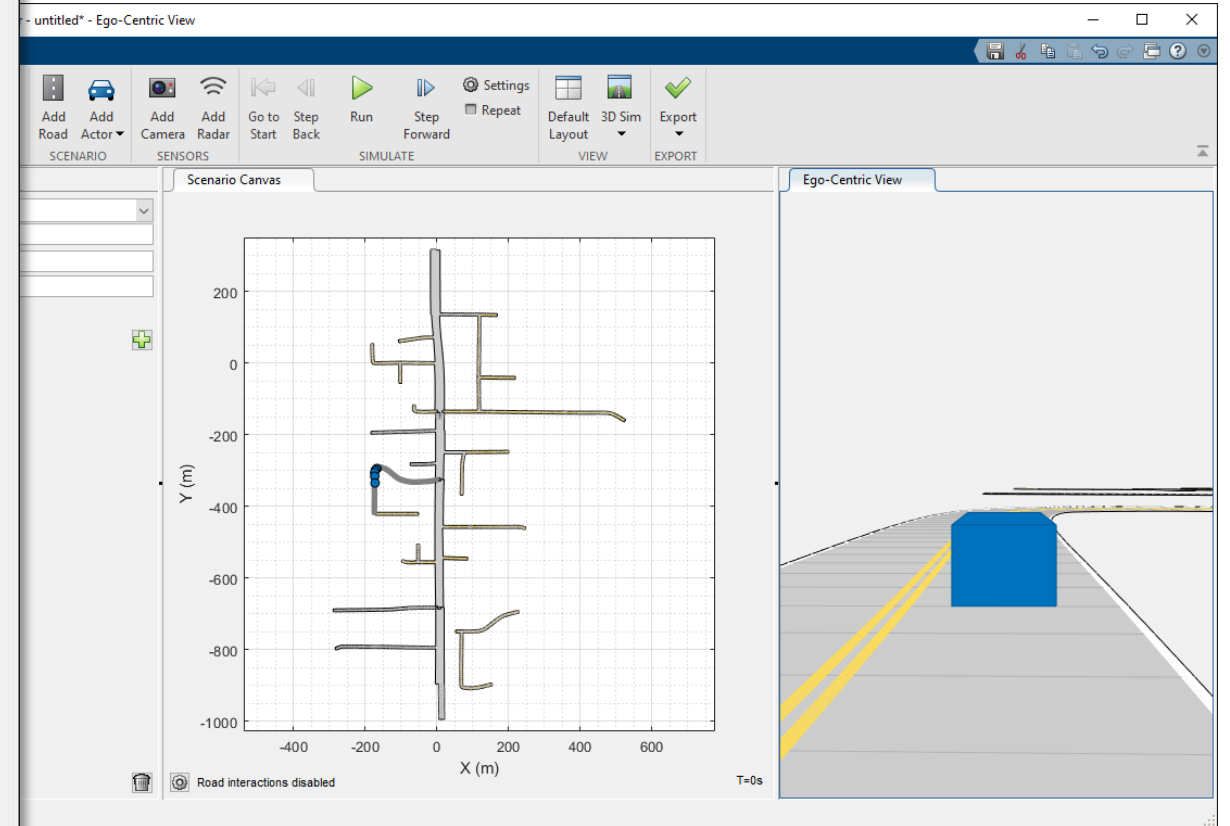
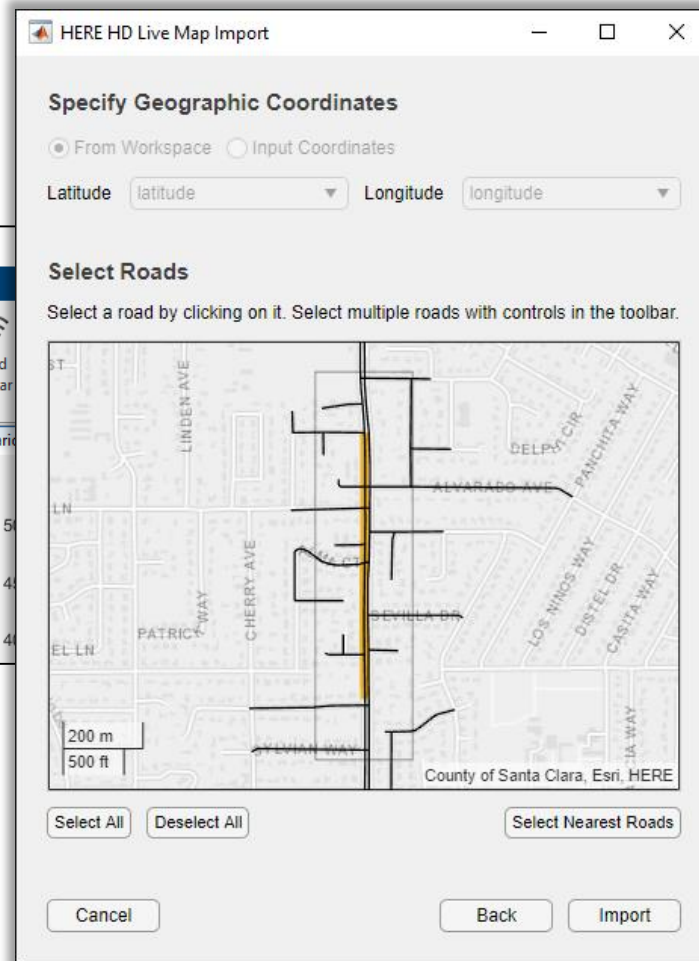
R2020a

Automated Driving Toolbox

HERE HD Live Mapに
アクセスし、ロードネットワー
クをインポート



最終的にインポートする
道路は、GUI上でマウス操
作により選択可能

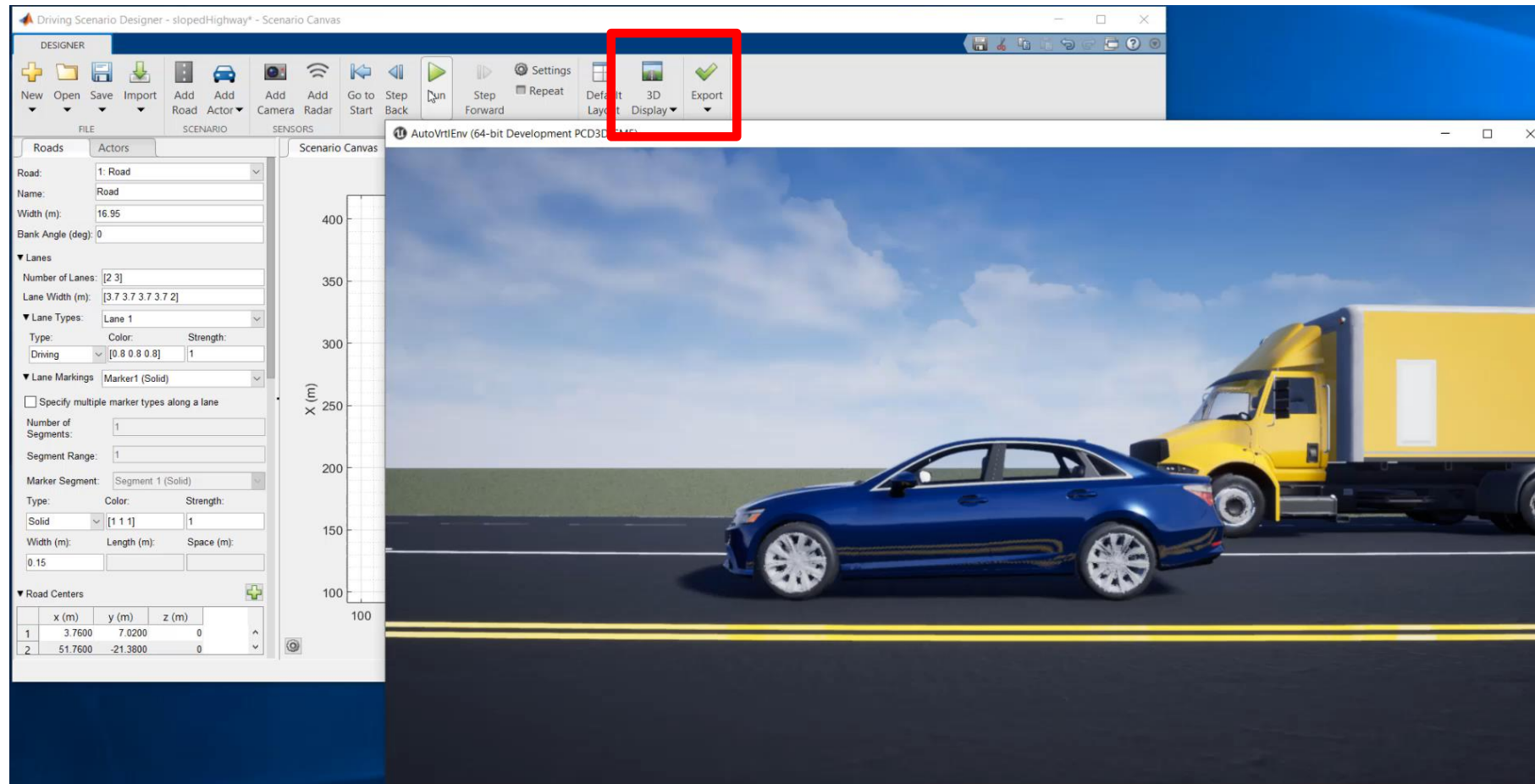


Driving Scenario -> Unreal可視化

R2020a

Automated Driving Toolbox

Driving Scenario Designer上で作成したシーンの3D – Photo realistic可視化



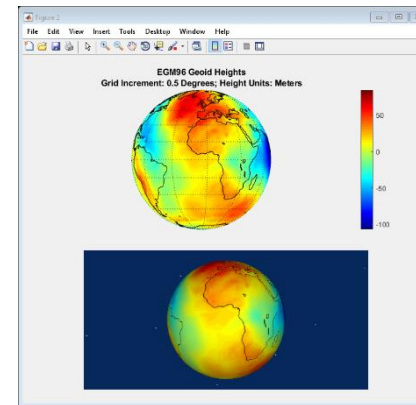
地図関係Update

Automated Driving Toolbox

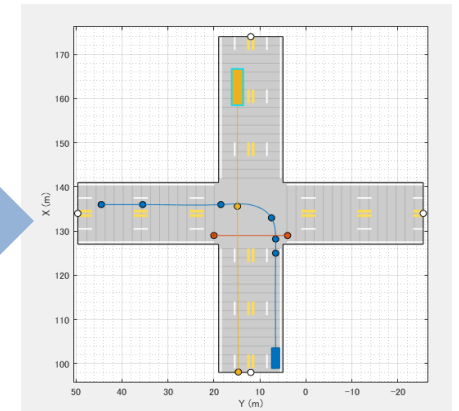
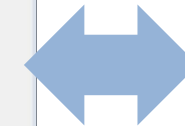
座標変換関数の追加

```
% Convert route to Cartesian coordinates
alt = 10; % 10 meters is an approximate altitude in Boston, MA
origin = [latitude(1), longitude(1), alt];
[xEast, yNorth] = latlon2local(latitude, longitude, alt, origin);

% Visualize route's shape
figure;
plot(xEast, yNorth)
axis('equal'); % set 1:1 aspect ratio to see real-world shape
```



緯度、経度、高度(楕円体高)



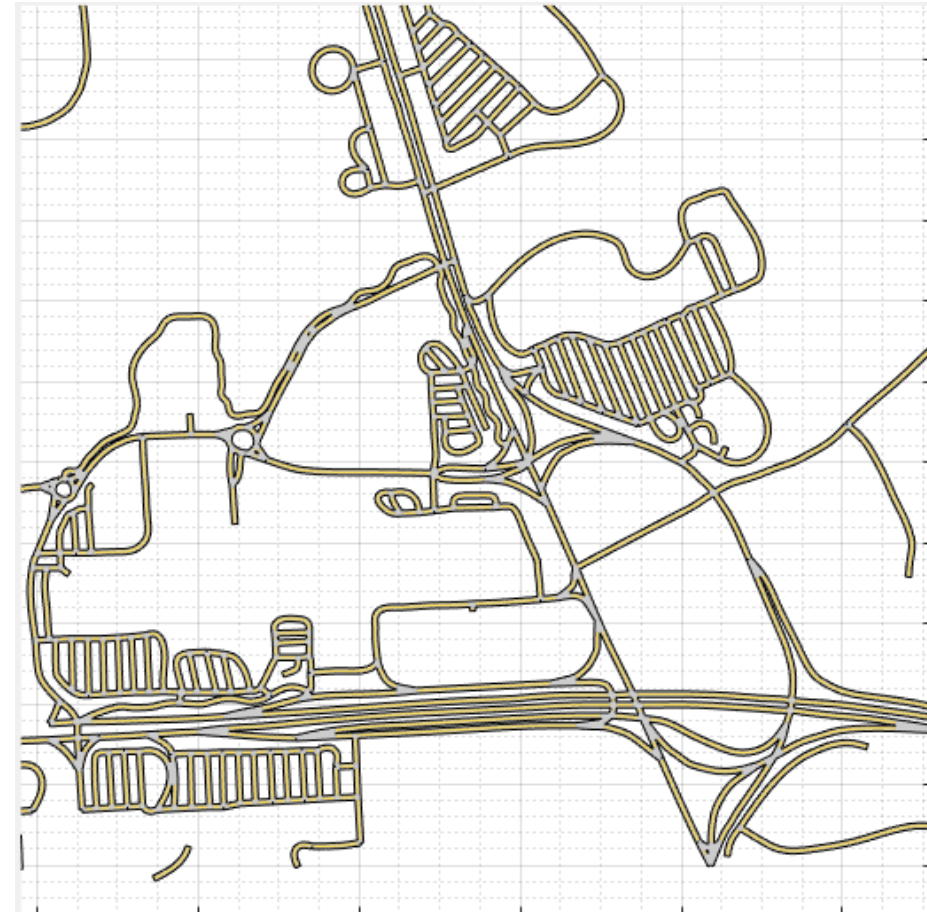
x座標(m)、y座標(m)、z座標(m)

Driving Scenario パフォーマンス改善

R2020a

Automated Driving Toolbox

Scenario	R2019b	R2020a
Road Creation		
Single long road ~44km	24.1s	5.73s
Natick scenario (489 roads)	21.48s	12.49s
Actor Trajectory Creation		
Single actor trajectory ~44km	10.08s	0.43s





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