

---

```
function [worldfile, roads_geo_out] = calcWorldFile()
% roads_geo_out wird ein shapefile
% Shapefile einlesen
roads = shaperead('boston_roads.shp');

% leere Datenstruktur anlegen
roads_geo_out = roads;

% NAD 83 Proj. - Info aus Geotiff laden
info = geotiffinfo('boston.tif');

for i = 1 : length(roads)
    N = 1;
    for k = 1 : length(roads(i).X)
        x(N) = roads(i).X(k) * unitsratio('sf', 'm');
        y(N) = roads(i).Y(k) * unitsratio('sf', 'm');
        [roads_geo_out(i).Y(k), roads_geo_out(i).X(k)] = projinv(info,
            x(N), y(N));
        N = N + 1;
    end
end

% Esri World File erstellen
% Pixelkoordinaten aus Screenshot der Karte (Map.png)
M = [554, 620, 1; 196, 511, 1; 885, 635, 1; 740, 274, 1];
% Geokoordinaten aus Google Maps herausgeholt
blon = [-71.070726;-71.092461;-71.050471;-71.059216];
blat = [42.351995;42.356956;42.351568;42.367701];

% Lineares Gleichungssystem von Matlab loesen lassen
alonn = M\blon;
alonn = M\blat;
worldfile(1,1) = alonn(1,1);
worldfile(2,1) = alonn(1,1);
worldfile(3,1) = alonn(2,1);
worldfile(4,1) = alonn(2,1);
worldfile(5,1) = alonn(3,1);
worldfile(6,1) = alonn(3,1);

fileID = fopen('worldfile.pgw','w');
fprintf(fileID, '%2.12f\n',worldfile);

shapewrite(roads_geo_out, 'roads_geo_out.shp')

%save('worldfile','worldfile')
end

ans =
```

---

---

0.000061002258997  
0.000000262541342  
-0.000000366743741  
-0.000045003406098  
-71.104251551971373  
42.379850853188053

*Published with MATLAB® R2018a*