



PRIMERI IZ 1. PDF-A

naivni alg

$$\begin{bmatrix} 2. & 0. & 0. \\ 0. & 2. & -1. \\ 0. & -1. & 2. \end{bmatrix}$$

dlt algoritam --> dobija se kao kod naivnog

$$\begin{bmatrix} 2 & 0 & 0 \\ 0 & 2 & -1 \\ 0 & -1 & 2 \end{bmatrix}$$

modif dlt algoritam --> dobija se kao kod naivnog

$$\begin{bmatrix} \begin{bmatrix} 2 & 0 & 0 \\ 0 & 2 & -1 \\ 0 & -1 & 2 \end{bmatrix} \end{bmatrix}$$

naivni algoritam - mora 4 tacke:

```
[[ 0.44871795  0.14957265 -0.5982906 ]
 [-0.19230769  0.76923077 -0.57692308]
 [-0.07277526  0.07378079  0.41075918]]
```

dlt algoritam - za 4 tacke:

```
[[ 0.3418787  0.11395957 -0.45583826]
 [-0.14651944  0.58607777 -0.43955833]
 [-0.05544755  0.05621367  0.31295787]]
```

dlt algoritam - za pet tacaka:

```
[[ 0.34349761  0.11823681 -0.48379032]
 [-0.15246704  0.58506938 -0.39503374]
 [-0.05732138  0.05556327  0.32557538]]
```

dlt nije osetljiv na permutaciju odgovarajucih tacaka:

```
[[ -0.34349761 -0.11823681  0.48379032]
 [ 0.15246704 -0.58506938  0.39503374]
 [ 0.05732138 -0.05556327 -0.32557538]]
```

dlt nije invarijantan na promenu koordinata:

dlt pre promene koordinata

```
[[ -0.3435 -0.1182  0.4838]
 [ 0.1525 -0.5851  0.395 ]
 [ 0.0573 -0.0556 -0.3256]]
```

dlt posle promene koordinata

```
[[ -0.3435 -0.1167  0.4744]
 [ 0.1552 -0.5898  0.3949]
 [ 0.0583 -0.0557 -0.331 ]]
```

modifikovani DLT algoritam - poredjenje sa DLP algoritmom i invarijantnost u odnosu na transformaciju koordinata:

dlt algoritam

```
[[-0.343498 -0.118237  0.48379 ]  
 [ 0.152467 -0.585069  0.395034]  
 [ 0.057321 -0.055563 -0.325575]]
```

modifikovani dlt algoritam

```
[[-0.343498 -0.117186  0.477321]  
 [ 0.155962 -0.590155  0.391082]  
 [ 0.058343 -0.056006 -0.330244]]
```

modifikovani dlt ne zavisi od izbora koordinata:

modifikovani dlt pre promene koordinata

```
[[-0.5195 -0.1772  0.7219]  
 [ 0.2359 -0.8925  0.5914]  
 [ 0.0882 -0.0847 -0.4994]]
```

modifikovani dlt posle promene koordinata

```
[ [ 0.5195  0.1772 -0.7219]  
 [-0.2359  0.8925 -0.5914]  
 [-0.0882  0.0847  0.4994]]
```

PRIMERI IZ 3. PDFa

primenom naivnog alg dobijamo istu matricu

$$\begin{bmatrix} 0 & 3 & 5 \\ 4 & 0 & 0 \\ -1 & -1 & 6 \end{bmatrix}$$

primena dlt algoritma

pre skaliranja

$$\begin{bmatrix} 5.30528511e-05 & 3.20011319e-01 & 5.32929220e-01 \\ 4.26445525e-01 & -2.02187024e-05 & -2.95145391e-05 \\ -1.06595323e-01 & -1.06519060e-01 & 6.39542445e-01 \end{bmatrix}$$

posle skaliranja

$$\begin{bmatrix} 4.97352886e-04 & 3.00000000e+00 & 4.99603472e+00 \\ 3.99778538e+00 & -1.89543630e-04 & -2.76689017e-04 \\ -9.99295809e-01 & -9.98580867e-01 & 5.99549835e+00 \end{bmatrix}$$

primena modifikovanog dlt algoritma

pre skaliranja

$$\begin{bmatrix} 2.78870278e-04 & 2.35462113e-01 & 3.90228745e-01 \\ 3.12763189e-01 & -4.21918913e-05 & -1.51134635e-04 \\ -7.81013437e-02 & -7.77052190e-02 & 4.68449489e-01 \end{bmatrix}$$

posle skaliranja

$$\begin{bmatrix} 3.55305923e-03 & 3.00000000e+00 & 4.97186668e+00 \\ 3.98488553e+00 & -5.37562804e-04 & -1.92559175e-03 \\ -9.95081662e-01 & -9.90034676e-01 & 5.96846960e+00 \end{bmatrix}$$

testiramo invarijantnost u odnosu na promenu koordinata

PRVO DLT

nakon promene:

```
[[ 3.54052815e-03  3.00000000e+00  4.97202594e+00]
 [ 3.98495769e+00 -5.41495292e-04 -1.90602316e-03]
 [-9.95105736e-01 -9.90084898e-01  5.96862723e+00]]
```

pre promene

```
[[ 4.97352886e-04  3.00000000e+00  4.99603472e+00]
 [ 3.99778538e+00 -1.89543630e-04 -2.76689017e-04]
 [-9.99295809e-01 -9.98580867e-01  5.99549835e+00]]
```

SADA MODIF DLT

nakon promene:

```
[[ 3.55305923e-03  3.00000000e+00  4.97186668e+00]
 [ 3.98488553e+00 -5.37562804e-04 -1.92559175e-03]
 [-9.95081662e-01 -9.90034676e-01  5.96846960e+00]]
```

pre promene

```
[[ 3.55305923e-03  3.00000000e+00  4.97186668e+00]
 [ 3.98488553e+00 -5.37562804e-04 -1.92559175e-03]
 [-9.95081662e-01 -9.90034676e-01  5.96846960e+00]]
```