

MCPD

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CPD⁽¹⁾

CPD

MCPD⁽²⁾

CPD

MCPD .

.MCPD CPD :

Two Dimensional Modified Cumulative Probability Distribution (MCPD)

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Abstract

Cumulative Probability Distribution (CPD) is a statistical approach in comparison of multi-path fading models. One certain problem was encountered in this comparison method, which is its inability in distinguishing between certain sets of data. This problem has been covered thoroughly in this paper and a modified two dimensional CPD (MCPD) is introduced. It outputs three-dimensional and uses cross sectioning techniques. It also has the advantage of distinguishing between signals that are very similar to each other and have very close CPD.

Key words: Fading, CPD, MCPD.

1- Cumulative Probability Distribution
2- Modified CPD

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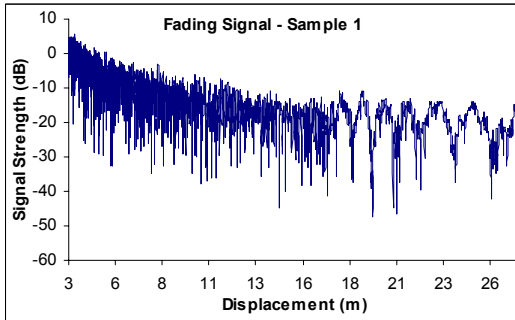
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(CPD)

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N_1

N

N_1/N

L_1

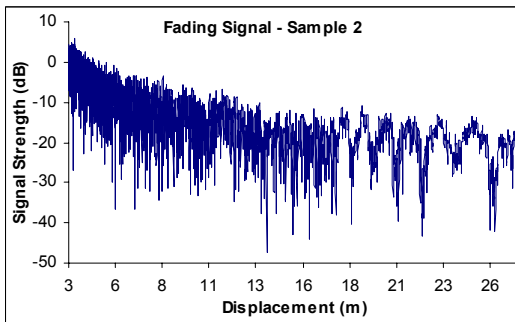
L_1

(L_2, L_3, \dots, L_n)

L_i

N_i/N

CPD



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$/ \lambda$

$\lambda = / \text{cm}$

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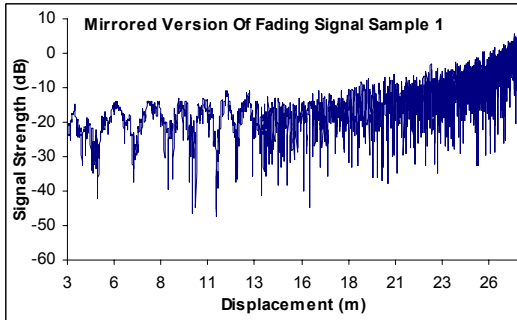
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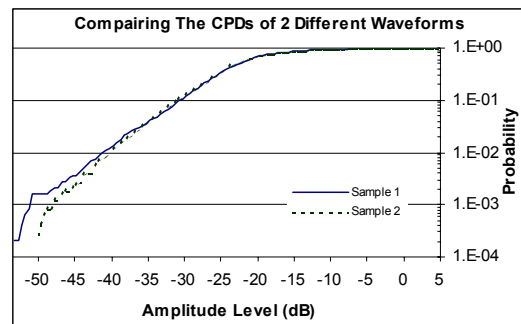
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CPD ()

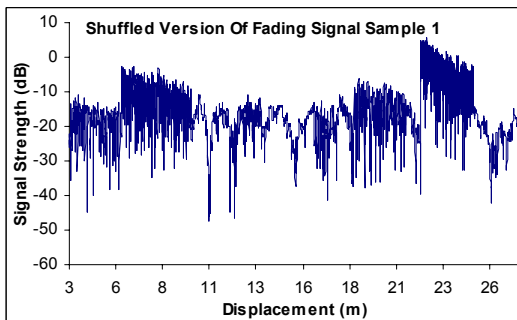
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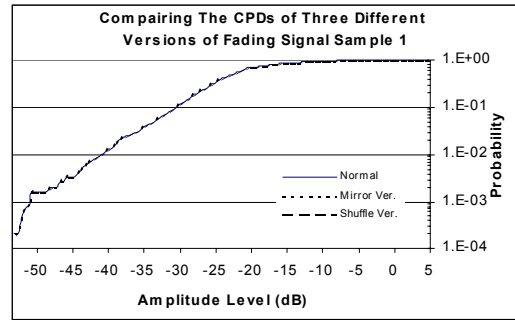
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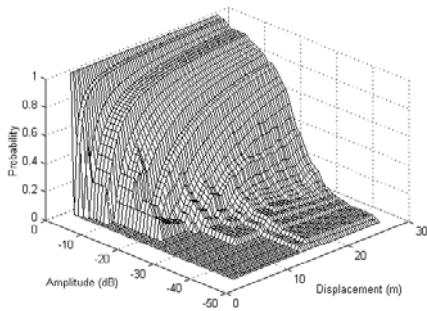
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CPD -

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CPD

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() ()

CPD

CPD

MCPD(X,Y)

X

MCPD

Y

CPD

MCPD(X,Y)

Y

X

() () , ()

(c)
, m

CPD

CPD

MCPD

CPD

CPD , m

MCPD(X,Y)

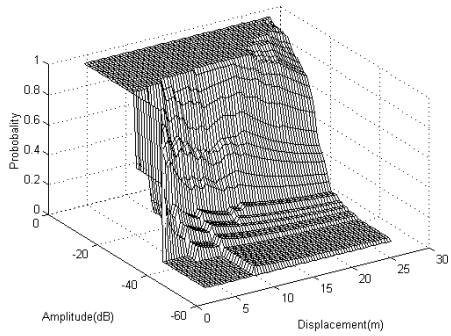
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(b) (a)

CPD

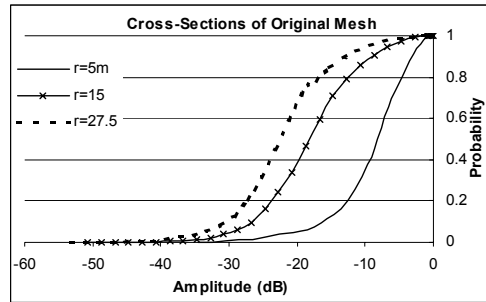
(c)

MCPD

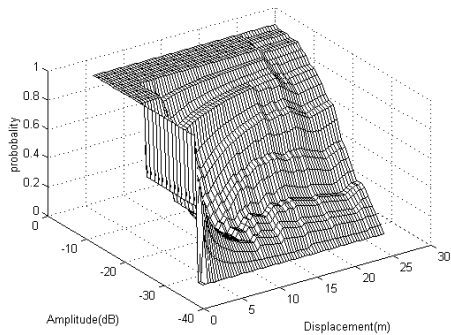


MCPD -

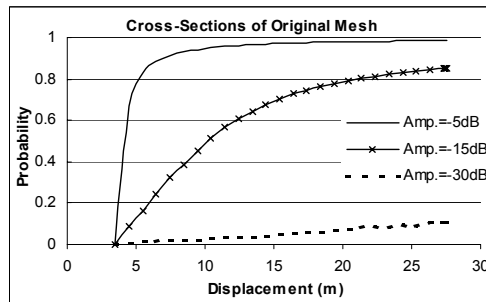
CPD



(a)

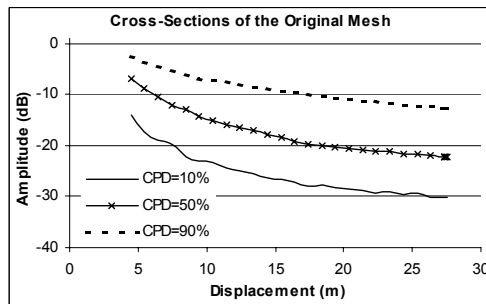


MCPD -



(b)

(c)



(c)

CPD

Displacement

(a)

CPD

(Amplitude)

(b)

(CPD)

(c)

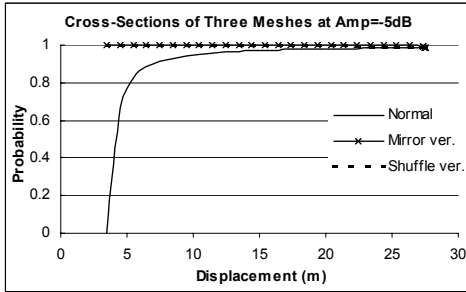
(a)

CPD

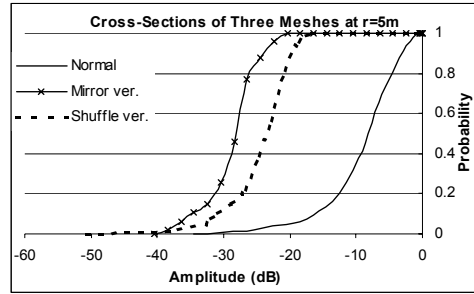
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MCPD

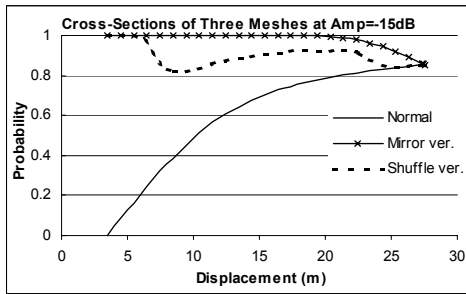
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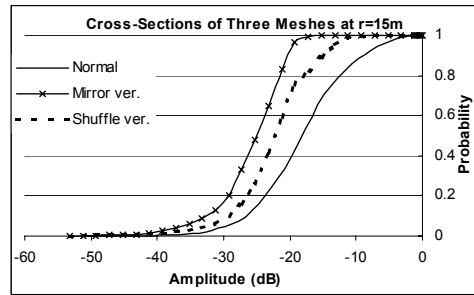
(a)



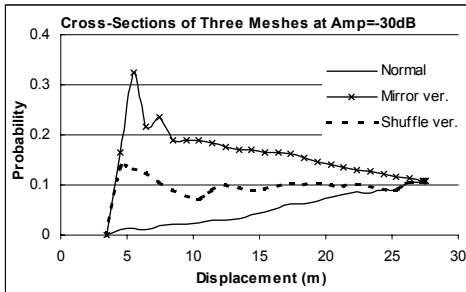
(a)



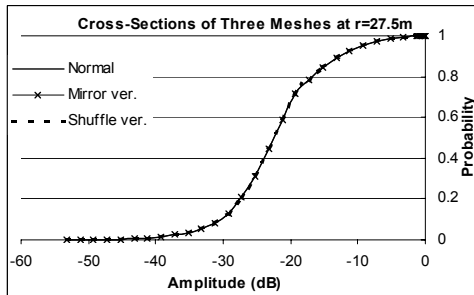
(b)



(b)



(c)



(c)

Amp.=-5dB (a)
 Amp.=-15dB (b)
 Amp.=-30dB (c)

r=5m (a)
 r=15m (b)
 r=27.5m (c)

Amplitude=-5dB

() ()

() ()

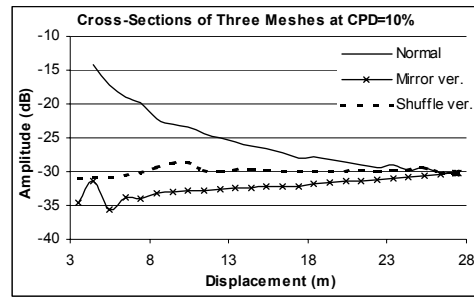
MCPD

MCPD

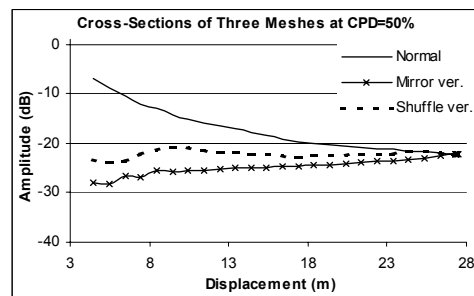
CPD

CPD

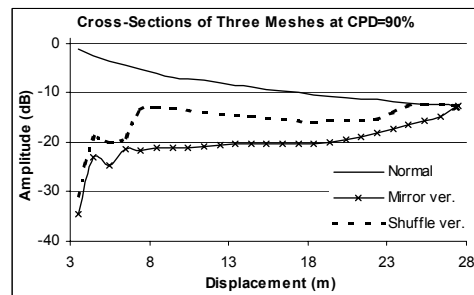
MCPD



(a)



(b)



(c)

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CPD=10%

(a)

CPD=50%

(b)

CPD=90%

(c)

CPD

CPD

CPD

CPD

MCPD