

"Mel Cepstral Distortion", 或者简称为"MCD", 是用于语音处理和语音识别领域的度量标准。用于衡量合成或识别语音的 MFCC 与参考语音的 MFCC 之间的相似程度。较低的 MCD 值表示更好的质量和准确性。MCD 是使用各种数学技巧（例如均方根误差（RMSE）或动态时间规整（DTW））来比较 MFCC 而计算出来的。

下面对于十个 speaker 分别模拟五种情感的一句语句，再通过比较模拟语句和对应的原始语句计算出 MCD 值，具体如下：

MCD	Neutral	Surprise	Happy	Sad	Angry
Speaker1	161.9867	140.1273	135.3367	130.3277	114.0761
Speaker2	138.5831	144.1210	156.2593	130.6664	120.2775
Speaker3	181.1022	132.1522	181.5225	187.8136	136.4872
Speaker4	142.0745	116.1689	142.3584	165.3856	156.3413
Speaker5	124.4939	119.4828	151.5691	129.4741	102.0340

Speaker_simulationMCD

Emotion	sentence
Neutral	That I am a born nurse.
Surprise	The art quite safe with me.
Happy	this turn goes to the hill.
Sad	The new born baby is stolen as we go.
Angry	We all see panda on TV or in the zoo.

Speaker1_Sentence

Emotion	sentence
Neutral	She was born on april nineteen forty three.
Surprise	You woke me up!
Happy	I shall say good bye.
Sad	I'd far rather go without them than eat them!
Angry	Am I an absolute pauper?

Speaker2_Sentence

Emotion	sentence
Neutral	Said the witch.
Surprise	But mom I'm not certain about.
Happy	A thief in the night.
Sad	Hannibal come to see you.
Angry	A voice said: Come in.

Speaker3_Sentence

Emotion	sentence
Neutral	Let it give us a chance, my precious.
Surprise	Mister lawson saw george last night.
Happy	Her kind and firm glance.
Sad	To buy two pork chops.
Angry	She has felt shy of it.

Speaker4_Sentence

Emotion	sentence
Neutral	What an impetuous boy he is!
Surprise	The name of the song is called haddocks.
Happy	She may mind ye of her.
Sad	I thank you for this mercy!
Angry	Your own wife is not at home.

Speaker5_Sentence

Speaker1:

The new born baby is stolen as we go.|Sad 0011_001235
 We all see panda on TV or in the zoo.|Angry 0011_000494
 The art quite safe with me.|Surprise 0011_001478
 That I am a born nurse.|Neutral 0011_000060
 this turn goes to the hill.|Happy 0011_000826

speaker2:

She was born on april nineteen forty three.|Neutral 0012_000071
 You woke me up!|Surprise 0012_001696
 I'd far rather go without them than eat them!|Sad 0012_001125
 Am I an absolute pauper?|Angry 0012_000472
 I shall say good bye.|Happy 0012_000872|0012

speaker3:

A voice said: Come in.|Angry 0013_000637
 A thief in the night.|Happy 0013_001016
 Hannibal come to see you.|Sad 0013_001107
 But mom I'm not certain about.|Surprise 0013_001737
 Said the witch.|Neutral 0013_000098

speaker4:

Mister lawson saw george last night.|Surprise 0014_001513

She has felt shy of it.|Angry 0014_000638
Her kind and firm glance.|Happy 0014_000950
To buy two pork chops.|Sad 0014_001143
Let it give us a chance, my precious.|Neutral 0014_000213

speaker5:

I thank you for this mercy!|Sad 0015_001182
What an impetuous boy he is!|Neutral 0015_000140
The name of the song is called haddocks.|Surprise 0015_001718
Your own wife is not at home.|Angry 0015_000580
She may mind ye of her.|Happy 0015_000742

I must have two to fetch and carry. | Angry

Speaker	Speaker1	Speaker2	Speaker3	Speaker4	Speaker5	Speaker6
MCD	125.5464	116.1544	125.8693	130.2037	113.9503	112.7104

No thank you. | Neutral

Speaker	Speaker1	Speaker2	Speaker3	Speaker4	Speaker5	Speaker6
MCD	163.0787	158.1844	173.4911	161.1407	162.8394	158.8725

How I hate this foul pool! | Surprise

Speaker	Speaker1	Speaker2	Speaker3	Speaker4	Speaker5	Speaker6
MCD	122.4717	117.8642	131.7858	134.0735	119.5207	112.6412

Mister share man, I move for a division. | Happy

Speaker	Speaker1	Speaker2	Speaker3	Speaker4	Speaker5	Speaker6
MCD	156.1277	141.1438	137.8248	138.2568	150.5633	146.7725

This is the way that snakes always talk. | Sad

Speaker	Speaker1	Speaker2	Speaker3	Speaker4	Speaker5	Speaker6
MCD	149.5923	139.1428	159.0284	151.5911	146.1471	136.9696