1) Build event-pair table

dt.ct
(event-pair provided by ph2dt)

OR

hypoDD.pha
(travel-time)

event.sel
(event information)

station.sel
(station information)

ttdb.txt
(travel-time table)

Practical travel-time

Theoretical travel-time

Event-pair table
(including travel-time of common station)

2) Build waveform database

P wave
wb
wa

wbs
was

S wave

Z component

N component

E component

IF wa > 0.9*(S-P)/wbs > 0.5*(S-P)

Yes ->
wa = 0.9*(S-P)/wbs = 0.5*(S-P)

No -> pass

Waveform database

3) Build dt.cc

Preproccess
1 -> rmean
2 -> taper
3 -> filter

IF SNR > threshold
(e.g., 5)

Yes -> keep   No -> remove

Cross-correlation (CC)

IF CC value > threshold
(e.g., 0.7)

Yes -> keep   No -> remove

Output dt.cc

FDTCC