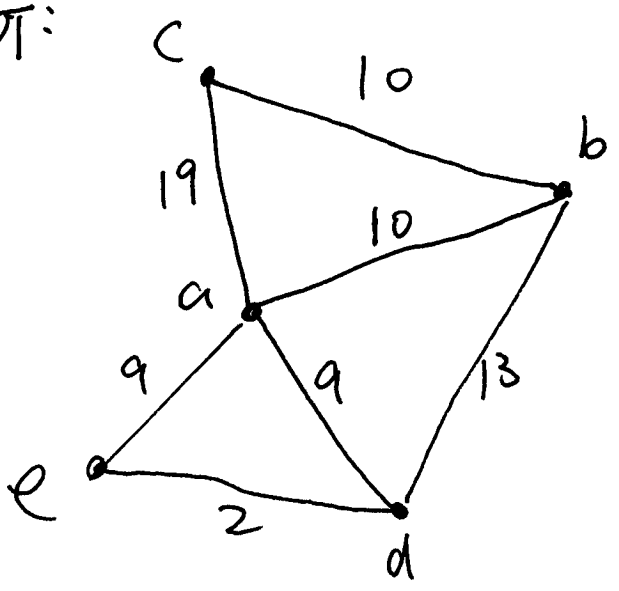
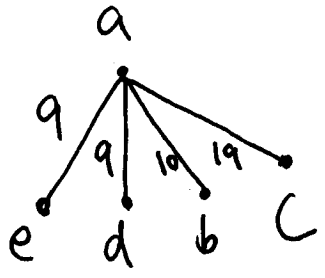
Created by 王旭昌 2010 Fall
Redrawn by Kun-Mao Chao
Verified

G:



The shortest-paths trees rooted at different medians might have different routing costs.

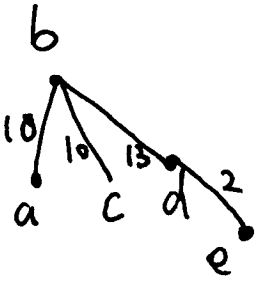
SPT_a



$\sum d_G(a,*) = 47$

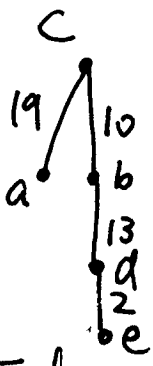
median

SPT_b



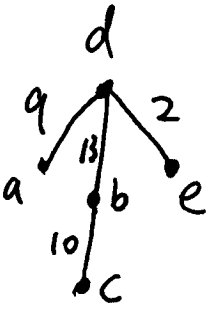
$\sum d_G(b,*) = 48$

SPT_c



$\sum d_G(c,*) = 77$

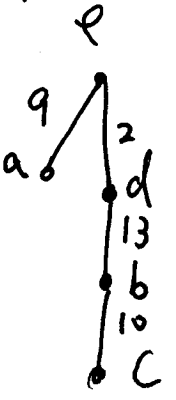
SPT_d



$\sum d_G(d,*) = 47$

median

SPT_e



$\sum d_G(e,*) = 51$

$C(SPT_a) = 2\times1\times4\times(9+9+10+19) = 376$

$C(SPT_b) = 2\times1\times4\times(10+10+2)+2\times2\times3\times13 = 332$

$C(SPT_c) = 2\times1\times4\times(19+2)+2\times2\times3\times(10+13) = 444$

$C(SPT_d) = 2\times1\times4\times(9+10+2)+2\times2\times3\times13 = 324$

$C(SPT_e) = 2\times1\times4\times(9+10)+2\times2\times3\times(2+13) = 332$

a, d: medians

$C(SPT_a) \neq C(SPT_d)$