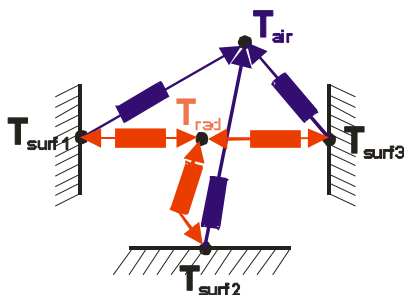


**exact solution**

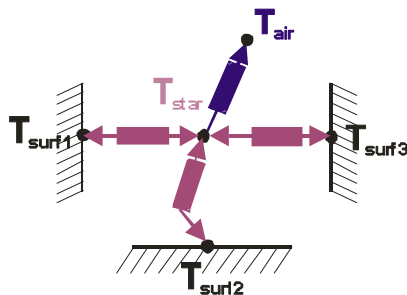
**(TRNSYS 17: detailed mode)**

longwave radiation exchange between all surfaces



**2 node model**

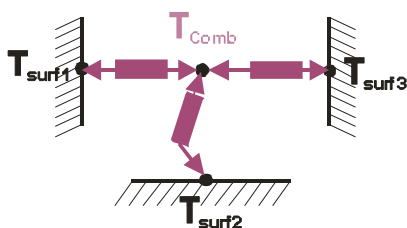
longwave radiation exchange of all surfaces with a radiation node exact for 3 surfaces



**2 starnode model**

**(TRNSYS 17: standard mode)**

longwave radiation and convective heattransfer exchange of all surfaces with a fictive star node. Convective heattransfer from the starnode to the airnode. Good for more then 2 surfaces with similar dimensions and HTC



**1 node model**

**(TRNSYS 17: simple mode)**

combined heat transfer, ok for annual heating loads only, problem no air temperature T<sub>air</sub> ! Response to slow for convective gains and to fast for radiative gains

- convective resistance
- radiative resistance
- combined resistance

different longwave mode radiation modes