We study the Sigma invariants for the Thompson group $F$ and some new results on the generalized Thompson groups of type $F$. The results on the Sigma invariants of the group $F$ is a joint work with R. Bieri and R. Geoghegan, published in Groups Geom. Dyn. 4 (2010), no. 2. We will discuss the Sigma invariants in dimension 2 of the generalised Thompson groups of type $F$, this is a joint work with Robert Bieri (not submitted at the time of the writing of the abstract). In this case decompositions of the generalised Thompson groups as fundamental groups of graph of groups is vital for understanding the Sigma2 invariants. (Received August 31, 2011)