Star Wars Day Problem

Problem (Problem 7)**.** For a signed graph Σ, let $\nu(\Sigma)$ denote the maximum number of pairwise disjoint negative circles in Σ. Let Σ_0 and Σ_1 be signed graphs with some t-sum $\Sigma_0 \oplus_t \Sigma_1$, $t \geq 0$.

(a) If Σ_0 is balanced, what is the relationship between $\nu(\Sigma_1)$ and $\nu(\Sigma_0 \oplus_t \Sigma_1)$?

(b) What is the general relationship among $\nu(\Sigma_0)$, $\nu(\Sigma_1)$, and $\nu(\Sigma_0 \oplus_t \Sigma_1)$, without assuming Σ_0 or Σ_1 is balanced?

(c) (Possible Research Problem) What does this have to do with *Star Wars*?