1023-52-1402 **Stefan O Tohaneanu*** (`tohanean@math.tamu.edu`), Mathematics Department, Texas A&M University, College Station, TX 77843-3368, and **Hal Schenck**. *Freeness of Line-Conic Arrangements in* $\mathbb{P}^2$.

Let $\mathcal{C}$ be a collection of smooth rational plane curves $C_i \subseteq \mathbb{P}^2$, such that $\mathcal{C} = \bigcup_{i=1}^{n} C_i$ has only ordinary singularities. We prove that the addition-deletion operation used in the study of hyperplane arrangements has an extension which works for a large class of arrangements of smooth rational curves, giving an inductive tool for understanding the splitting of $\Omega^1(\mathcal{C})$–the module of logarithmic differential forms with pole along $\mathcal{C}$. We give an example showing that the most obvious version of Yoshinaga's criteria for freeness does not hold in this case. We also show that the analog of Terao's conjecture that splitting of $\Omega^1(\mathcal{A})$ is combinatorially determined is false in this setting. (Received September 25, 2006)

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