1023-08-869 **Berit Nilsen Givens*** (bngivens@csupomona.edu), Department of Mathematics and Statistics, 3801 W. Temple Ave, Pomona, CA, and **Amber Rosin** (arrosin@csupomona.edu), **Karen Linton** (kalinton@csupomona.edu) and **Laurie Dishman**. *Interassociates of the Free Commutative Semigroup on n Generators.*

Given a semigroup $(S, \cdot)$, an interassociate of S is a semigroup with the same underlying set S and a binary operation $*$ such that $a \cdot (b * c) = (a \cdot b) * c$ and $a * (b \cdot c) = (a * b) \cdot c$. We examine interassociativity for the free commutative semigroup on n generators, denoted $(S, \cdot)$. We begin by determining the structure of all interassociates of $(S, \cdot)$. It turns out that every interassociate can be written in the form $(S, *_{\bar{k}})$, depending only on a n-tuple $\bar{k} = (k_1, \ldots, k_n)$. Next, if $(S, *_{\bar{k}})$ and $(S, *_{\bar{\ell}})$ are isomorphic interassociates of $(S, \cdot)$ such that $\phi(x_i) = x_j$, for x_i and x_j in the generating set of S, then $k_i = \ell_j$. Finally, we will see that $(S, *_{\bar{k}})$ is isomorphic to $(S, *_{\bar{\ell}})$ if and only if $\{k_i\}_{i=1}^n$ is a permutation of $\{\ell_i\}_{i=1}^n$. (Received September 25, 2006)