1096-20-2789 **Arthur D. Grainger***, Morgan State University, Baltimore, MD. *On the structure of βS_J.*
Let J be infinite and let $I = \mathcal{P}_f(J)$. Define $S_J = \{(i,f) \mid i \in I,\ f : \mathcal{P}(i) \to \mathcal{P}(i)\}$. For (i,f), $(k,g) \in S_J$, define $f * g : \mathcal{P}(i \cup k) \to \mathcal{P}(i \cup k)$ as follows. For $x \in \mathcal{P}(i \cup k)$, let $(f * g)(x) = g(x)$, if $x = \varnothing$; let $(f * g)(x) = g(x \cap k)$, if $x \cap k \neq \varnothing$; let $f * g(x) = f(x)$, if $x \in \mathcal{P}(i \backslash k)$ and $x \neq \varnothing$. Define $(i,f) * (k,g) = (i \cup k, f * g)$. $(S_j, *)$ is a semigroup. We consider $(\beta S_J, \circledast)$, the *Stone–Čech* Compactification of the semigroup $(S_J, *)$. The collection $\{\beta_A(S_J) \mid A \in \mathcal{P}(J)\}$ is a partition of βS_J and the cardinality of $\beta_A(S_J)$ is $2^{2^{|J|}}$. (Received October 25, 2013)