Anthony W. Hager* (ahager@wesleyan.edu), Department of Math. and C.S., Wesleyan University, Middletown, CT 06459, and Richard N. Ball. Network character and tightness of the compact-open topology.

We show that the cardinals $t_{C(X)}, nc_{C(X)}, rt_X$ stand in increasing order, and compare these cardinals with some of the many others involved in the association of $C(X)$ to $X$. A corollary is that, for Čech-complete $X$, $t_{C(X)}$ is the Lindelöf number of $X$. Here: $X$ is a Tychonoff space, and $C(X)$ carries the compact-open topology. $t_{C(X)}$ is the familiar tightness. $nc_{C(X)}$ is the network character, i.e., the minimum size of a local network at 0. For $k$ an infinite cardinal, a $k$-cozero-set is the union of no more than $k$ cozero-sets, and $k$-def$_X$ is the minimum number of $k$-cozero-sets of the Čech-Stone compactification which intersect to $X$ (generalizing Mrowka’s $R$-defect). Finally, $rt_X$ is the minimum over $k$ of all numbers $k$-def$_X$. (Received September 07, 2005)