1057-32-29   **Chia-chi Tung*** (`chia.tung@mnsu.edu`), Dept. of Math. and Stat., Minnesota State University, Mankato, Mankato, MN. *On Weak Metaharmonicity and Holomorphicity of Distributions.* Preliminary report.

The purpose of this note is to prove the differentiability, respectively, semireal-analyticity of a metaharmonic distribution on a complex analytic space with an (infinitely) differentiable, respectively, real-analytic, density. As applications, a generalized Gauss' mean-value property is etablished for meta- (as well as weakly) harmonic functions, and characterizations of the weak holomorphicity of distributions (respectively, functions) on a complex space are given in terms of the local Cauchy-Riemann operators (respectively, $\bar{\partial}$-Euler currents). (Received December 24, 2009)