In the present talk, we consider a global Cauchy-Riemann type system with three unknown complex-valued functions of three real variables, which unify some conventional function theories for the Laplace operator. More, we provide a necessary and sufficient condition for the solvability of inhomogeneous Cauchy-Riemann type systems where the datum consists of continuous $\mathbb{C}$-valued functions and we describe its general solution by embedding the system in an appropriate quaternionic setting.