Theorem 1.2.1. *If $u \in C^1(\bar{\omega})$, we have*

$$u(\zeta) = (2\pi i)^{-1}\left\{\int_{\partial\omega} \frac{u(z)}{z-\zeta}\,dz + \iint_{\omega} \frac{\partial u/\partial \bar{z}}{z-\zeta}\,dz \wedge d\bar{z}\right\}, \qquad \zeta \in \omega. \tag{1.2.3}$$

Proof. Put $\omega_\varepsilon = \{z; z \in \omega,\ |z-\zeta| > \varepsilon\}$ where $0 < \varepsilon <$ the distance from ζ to $\complement\omega$. If we apply (1.2.2) to $u(z)/(z-\zeta)$ and note that $1/(z-\zeta)$ is analytic in ω_ε, we obtain

$$\iint_{\omega_\varepsilon} \partial u/\partial \bar{z}\,(z-\zeta)^{-1}\,d\bar{z} \wedge dz = \int_{\partial\omega} u(z)(z-\zeta)^{-1}\,dz - \int_0^{2\pi} u(\zeta + \varepsilon e^{i\theta})i\,d\theta.$$