For example, $n=2$. $V_1 = \{ z_1^{d_1-1}+I \}$.
$V_2 = \{ z_1^{d_1-2}+I,\ z_1^{d_1-1}+I \}, \cdots$ $V_{d_1-1} = \{ z_1+I, \cdots z_1^{d_1-1}+I \}$
$V_{d_1} = \{ z_1+I, \cdots z_1^{d_1-1}+I,\ z_1^{d_1-1}z_2+I \}$ $V_{d_1+1} = \{ z_1+I, \cdots z_1^{d_1-1}+I,\ z_1^{d_1-1}z_2+I,$
$z_1^{d_1-1}z_2^2+I \}$ $\cdots$ $V_\ell = \{ z_1+I, \cdots z_1^{d_1-1}+I,\ z_1z_2+I, \cdots z_1z_2^{d_2-1}+I,$
$\cdots z_1^{d_1-1}z_2^{d_2-1}+I \}$. $I \subset f^*\mathcal{O}_w \subset \mathcal{O}_z$ See tomorrow.

See P35. Introduction to Holomorphic Functions of Several Variables

In the case $n=2$ the Jacobi relation immediately implies the

Cayley-Bacharach Theorem. If C and D are curves in $\mathbb{P}^2$ of respective degrees m and n and meeting at mn distinct points, then any curve E of degree $m+n-3$ that passes through all but one point of $C \cap D$ necessarily passes through that remaining point also.

$n=2$. $C=D_1$ & $D_2^{\prime\prime D}$ meet transversely at $d_1 d_2$ distinct points

$$\sum_\nu \frac{g(P_\nu)}{(\partial(f_1,f_2)/\partial(x_1,x_2))(P_\nu)} = 0, \quad \deg(g) \le \sum_i d_i - 3$$

Since C meets with D transversely at mn distinct points P_ν's,
$\frac{\partial(f_1,f_2)}{\partial(x_1,x_2)}(P_\nu) \neq 0$, where $C = (f_1=0)$ $D=(f_2=0)$.