$\Rightarrow \quad \left(\dfrac{\partial g}{\partial z}\right)$ has rank 3 for generic points.

$\Rightarrow \quad \tau(W)$ has complex codimension 3. ⌟

$G(2, n+1)$ has only two Schubert cycles of codimension 3 – $\sigma_{3,0}$ and $\sigma_{2,1}$ – and so we can write

$$\tau(W) = \#(\tau(W) \cdot \sigma_{n-1,n-4}) \cdot \sigma_{3,0} + \#(\tau(W) \cdot \sigma_{n-2,n-3}) \cdot \sigma_{2,1}.$$

⌜ codim 3 : $\sum_{i=1}^{2} a_i = a_1 + a_2 = 3$ $\{a_1, a_2\}$ non increasing sequence $\Rightarrow$ $a_1 = 3,\ a_2 = 0,\ a_1 = 2,\ a_2 = 1.$

$\underset{\substack{\| \\ n-1}}{1+n-2-a_2 =}$ $\quad n-2+1 \quad$ $\underset{\substack{\| \\ n-4}}{n-2-3 = n-5+1}$ $\quad (n+1)-2-2 = n-3$

$(n+1)-2-1 = n-2$ ⌟

Now, $\sigma_{n-1,n-4}$ is the set of lines in $\mathbb{P}^n$ containing a point p and contained in a 4-plane $V_4 \subset \mathbb{P}^n$; if we choose our point p to lie off W, clearly $\tau(W)$ will be disjoint from $\sigma_{n-1,n-4}$.

⌜ $\sigma_{n-1,n-4} = \{\Lambda :\ \dim(\Lambda \cap V_1) \geq 1 \quad \dim(\Lambda \cap V_5) \geq 4\}$

$\Rightarrow \quad \Lambda \supset \langle e_1 \rangle. \qquad \Lambda \subset V_5.$

If we think of $G(2, n+1)$ as the set of lines in $\mathbb{P}^n$,

$p = \langle e_1 \rangle \qquad V_5 = $ 4-plane $V_4 \subset P^n$.

thus $\quad l = \Lambda \ni p \quad$ and $\quad \Lambda \subset V_4$.

If we choose p so that $p \notin W$,

$\tau(W) \cap \sigma_{n-1,n-4} = \phi$. If not, $\exists \ l \in \tau(W) \cap \sigma_{n-1,n-4}$, so that $p \in l$ & $l \subset W \Rightarrow p \in W$, contradiction. ⌟

On the other hand, $\sigma_{n-2,n-3}$ is the cycle of lines meeting