

What do we get?

o After a match in the proper game,

I has produced $(i_n)_{n \in \omega}$ with $\|i_n\| \in \mathcal{ON}$

II has produced $(j_n)_{n \in \omega}$ $B_n \in \mathcal{ON}$

as well as a strategy for II in the \mathcal{P} -point game

o Now \mathcal{u} is a non-meagre \mathcal{P} -filter, i.e. the \mathcal{P} -filter game strategy can be beaten.

o In other words, there are $(q_i)_{i \in \omega}$, $(p_{(q_0, \dots, q_i)})_{i \in \omega}$, $(H_{(q_0, \dots, q_i)})_{i \in \omega}$ as described above

and $\bigcup_{i \in \omega} q_i \in \mathcal{u}$

o But then (as in the last lemma) fusion is possible, i.e.

$q := \bigcap_{i \in \omega} p_{(q_0, \dots, q_i)} \in \mathcal{P}$; of course $q \leq p$

and $q \Vdash \dot{z}_i \in H_{(q_0, \dots, q_i)}$

o In particular, $q \Vdash \dot{z}_n \in B_n$ — so II wins the proper game. \square

After these important, but technical lemmas, we can approach the key lemma, the combinatorial argument that after killing a \mathcal{P} -point with Grigorič forcing, we will not resurrect the \mathcal{P} -point in a later ω^ω -bounding extension.

Unfortunately, Grigorič forcing is not enough for this. [AFAIK]

Shelah's original argument uses $G(\omega)^\omega$, the full ω -product of the Grigorič forcing with a non-meagre \mathcal{P} -filter.