Convex Hull

Divide-and-conquer (1)

- Interior

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❖ When $\boxed{x}$ belongs to the intersection of the subhulls, by monotonicity,

$\boxed{both}$ P_1 and P_2 are $\boxed{ordered}$ w.r.t. $\boxed{x}$
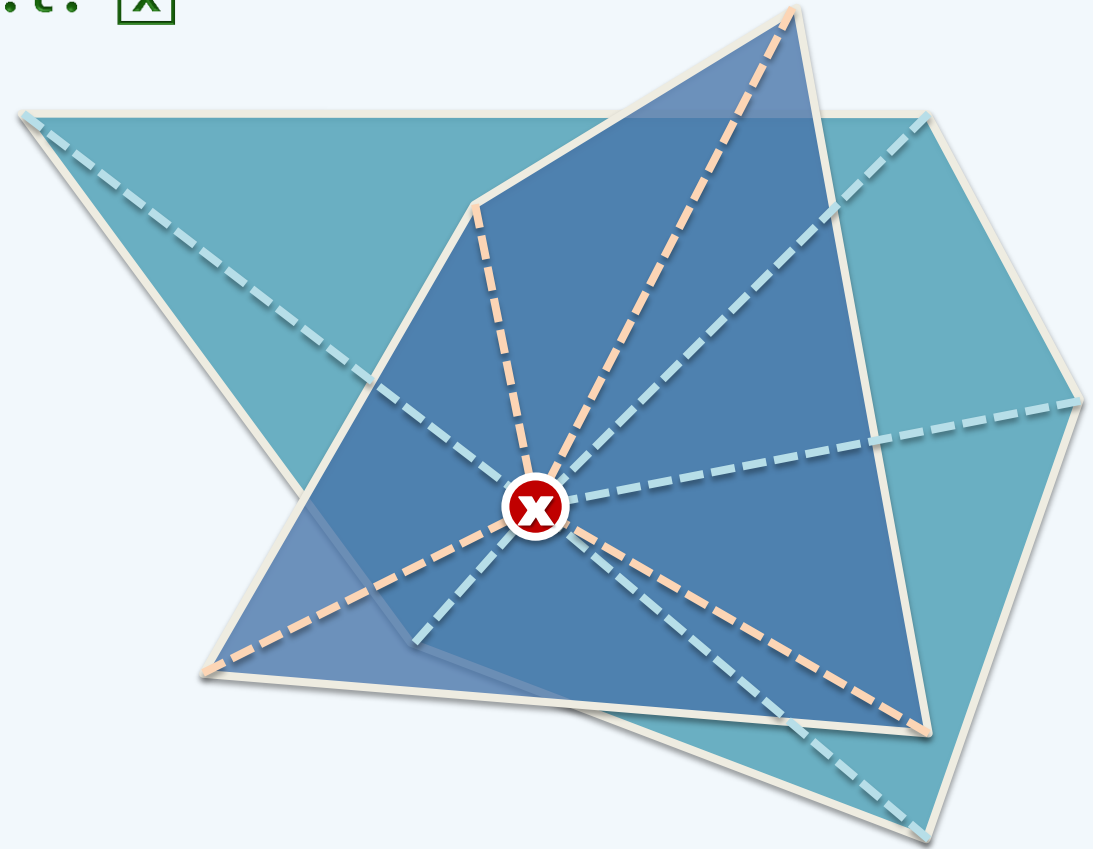
❖ Hence they can be merged

into a single sorted list
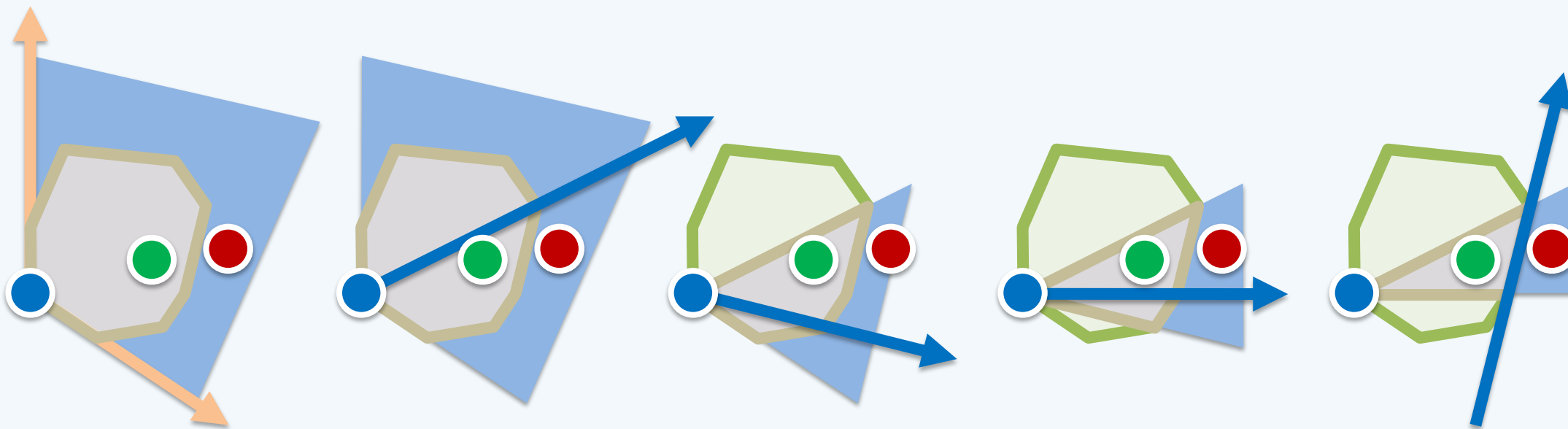
in $O(n + m)$ time

❖ Applying Graham scan to the $\boxed{star}$

produces CH($P_1 \cup P_2$)

in $O(n + m)$ time

❖ Again, DAC solves $\boxed{\text{ICPT}}$ in $\boxed{\mathcal{O}(\log n)}$ time, but does $\boxed{\text{NOT}}$ help here

❖ Fortunately, $\boxed{\mathcal{O}(n)}$ time is affordable here

❖ Now, what if $\boxed{x}$ lies exterior to P_2 ?