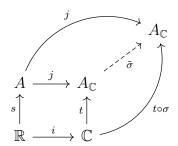
Let A be our \mathbb{R} -algebra and $\sigma: \mathbb{C} \to \mathbb{C}$ complex conjugation. Then we have the pushout diagram:



We know $A_{\mathbb{C}}^{\times}=t(\mathbb{C}^{\times}),\ s(\mathbb{R}^{\times})\subseteq A^{\times}$ and $j(A^{\times})\subseteq t(\mathbb{C}^{\times}).$ We need $A^{\times}\subseteq s(\mathbb{R}^{\times})$ as well.

If $u \in A^{\times}$, then $j(u) = t(\lambda)$ for some $\lambda \in \mathbb{C}^{\times}$. Then

$$t(\lambda) = j(u) = \tilde{\sigma}(j(u)) = \tilde{\sigma}(t(\lambda)) = t(\sigma(\lambda)),$$

so $\lambda = \sigma(\lambda)$ because t is injective. Hence $\lambda = i(\mu)$ for some $\mu \in \mathbb{R}^{\times}$ and $j(u) = j(s(\mu))$. And by injectivity again this implies $u = s(\mu)$.