The group of translations and powers: HNN extensions and a conjecture of White

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We consider the structure of the pseudogroup of local diffeomorphisms of the complex line generated by the affine maps and the exponential. Under suitable hypothesis, we prove that this pseudogroup has the structure of an HNN extension. As a consequence, we prove a conjecture of White concerning the group of germs at infinity of homeomorphisms of the real line generated by translations and real positive powers.