```
w-first-aux  THM

⊢  ∀the_w:World, i:Id, t:ℕ. first(<i,t>) ∈ 𝔹
  by InductionOnNat THEN RecUnfold ‘w-first‘ 0
     THEN
     Unfolds [‘w-time‘;‘w-loc‘] 0
     THEN
     Reduce 0
END
```