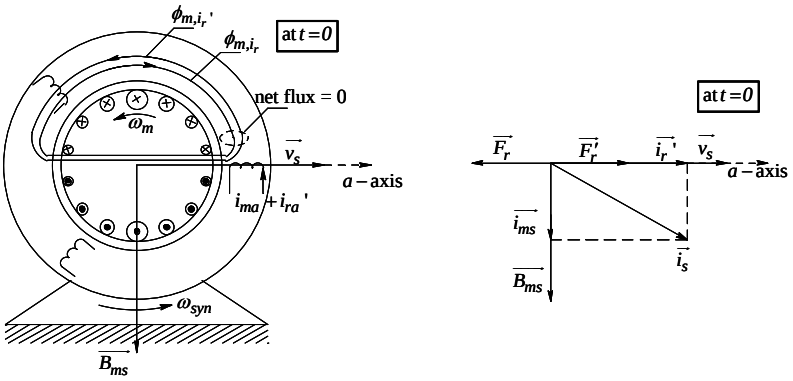
The animation in steady state in the motoring mode, with the rotor speed ω_m less than the synchronous speed ω_{syn}, represents Fig. 11-7 of the textbook.



Neglecting the stator leakage impedance, at time $t = 0$, the stator-voltage space vector $\vec{v}_s$ results in the magnetizing flux-density space vector $\vec{B}_{ms}$, by drawing magnetizing currents represented by the current space vector $\vec{i}_{ms}$. These magnetizing currents are animated by the equivalent winding in green. All these rotate at the synchronous speed ω_{syn}.

In this animation, the rotor leakage inductance is assumed to be zero. In the motoring mode ($\omega_m < \omega_{syn}$), the rotor-bar currents result in an mmf $\vec{F}_r$, which is nullified by $\vec{F}_r'$ created by addition currents drawn by the stator, represented by $\vec{i}_r'$. The total current drawn by the stator is represented by $\vec{i}_s = \vec{i}_{ms} + \vec{i}_r'$.

In the generator mode($\omega_m > \omega_{syn}$), the rotor-bar currents are opposite to those in the motoring mode. This is represented below by Fig. 11-14 of the textbook: