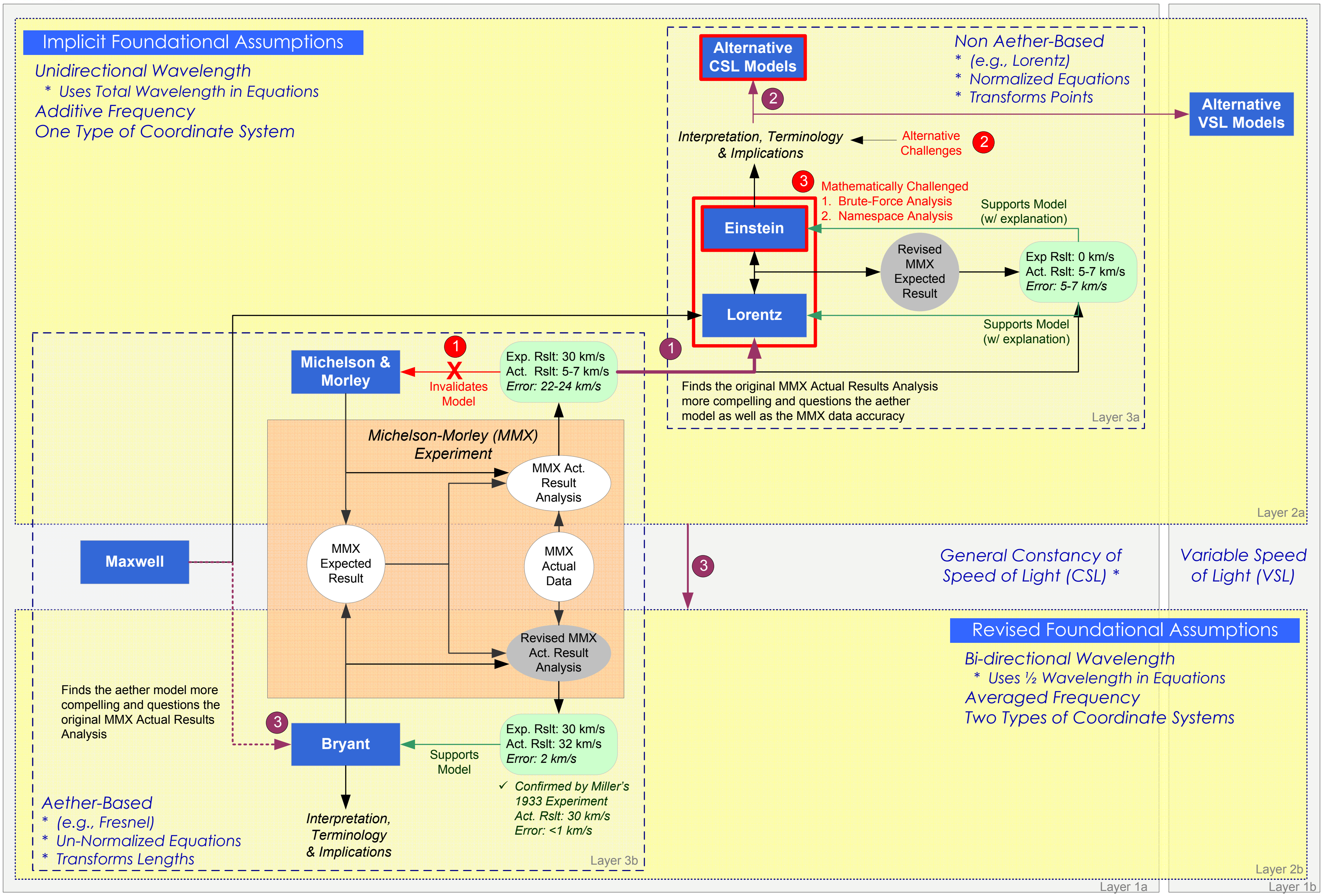
Relationship of Key Foundational Assumptions and Moving System Theories



Lorentz

Uses λ
Additive Frequency
Normalized Equations

Equations	Used As	
$\xi = \dfrac{x}{\sqrt{1-\dfrac{v^2}{c^2}}}$	$\xi = \dfrac{\lambda}{\sqrt{1-\dfrac{v^2}{c^2}}}$	$\xi = \dfrac{f}{\sqrt{1-\dfrac{v^2}{c^2}}}$
$\tau = \dfrac{t-\dfrac{vx}{c^2}}{\sqrt{1-\dfrac{v^2}{c^2}}}$	$\tau = \dfrac{\lambda}{c\sqrt{1-\dfrac{v^2}{c^2}}}$	$\tau = \dfrac{f}{c\sqrt{1-\dfrac{v^2}{c^2}}}$

Einstein

Uses λ
Additive Frequency
Normalized Equations

$\xi = \dfrac{x-vt}{\sqrt{1-\dfrac{v^2}{c^2}}}$	$\xi = \dfrac{\lambda}{\sqrt{1-\dfrac{v^2}{c^2}}}$	$\xi = \dfrac{f}{\sqrt{1-\dfrac{v^2}{c^2}}}$
$\tau = \dfrac{t-\dfrac{vx}{c^2}}{\sqrt{1-\dfrac{v^2}{c^2}}}$	$\tau = \dfrac{\lambda}{\sqrt{1-\dfrac{v^2}{c^2}}}$	$\tau = \dfrac{f}{\sqrt{1-\dfrac{v^2}{c^2}}}$

Changed the Fresnel / Michelson equations by Normalizing the Equations, keeping the input values intact

Fresnel / Michelson

Uses λ
Additive Frequency
Un-normalized Equations

Equations	Used As	
$\xi = \dfrac{x}{1-\dfrac{v^2}{c^2}}$	$\xi = \dfrac{\lambda}{1-\dfrac{v^2}{c^2}}$	$\xi = \dfrac{f}{1-\dfrac{v^2}{c^2}}$
$\tau = \dfrac{x}{c\left[1-\dfrac{v^2}{c^2}\right]}$	$\tau = \dfrac{\lambda}{c\left[1-\dfrac{v^2}{c^2}\right]}$	$\tau = \dfrac{f}{c\left[1-\dfrac{v^2}{c^2}\right]}$

Produced MMX actual results that did not match the MMX expected results

Kept the Fresnel / Michelson equations in their un-normalized form, but corrected the "input values" for the equations

Bryant

Uses $\lambda / 2$
Averaged Frequency
Un-normalized Equations

$\xi = \dfrac{x'}{1-\dfrac{v^2}{c^2}}$	$\xi = \dfrac{\lambda}{2\left[1-\dfrac{v^2}{c^2}\right]}$	$\xi = \dfrac{f}{2\left[1-\dfrac{v^2}{c^2}\right]}$
$\tau_\xi = \dfrac{x'}{c\left[1-\dfrac{v^2}{c^2}\right]}$	$\tau_\xi = \dfrac{\lambda}{2c\left[1-\dfrac{v^2}{c^2}\right]}$	$\tau_\xi = \dfrac{f}{2c\left[1-\dfrac{v^2}{c^2}\right]}$

$\frac{v^2}{c^2}$ $\frac{v^2}{c^2}$