More About the Mining Strategy.

$$\int_{t_{k-1}+\Delta t}^{t_k+\Delta t} h_i(t)\,dt \neq$$

$$\left[\int_{t_{k-1}}^{t_k} h_i(t)\,dt\right] = \int_0^{t_k} h_i(t)\,dt - \int_0^{t_{k-1}} h_i(t)\,dt$$

$$\left[\int_{t_{k-1}}^{t_k} h_i(t)\,dt\right]' = \left[\int_0^{t_k} h_i(t)\,dt\right]' - \left[\int_0^{t_{k-1}} h_i(t)\,dt\right]'$$

$$= \lim_{\Delta t\to 0} \frac{\int_0^{t_k+\Delta t} h_i(t)\,dt - \int_0^{t_k} h_i(t)\,dt}{\Delta t} - \lim_{\Delta t\to 0} \frac{\int_0^{t_{k-1}+\Delta t} h_i(t)\,dt - \int_0^{t_{k-1}} h_i(t)\,dt}{\Delta t}$$

$$= \lim_{\Delta t\to 0} \frac{\int_{t_{k-1}+\Delta t}^{t_k+\Delta t} h_i(t)\,dt - \int_{t_{k-1}}^{t_k} h_i(t)\,dt}{\Delta t}$$

$$= \lim_{\Delta t\to 0} \frac{\int_0^{t_k+\Delta t} h_i(t)\,dt - \int_0^{t_{k-1}+\Delta t} h_i(t)\,dt + \int_0^{t_{k-1}} h_i(t)\,dt - \int_0^{t_k} h_i(t)\,dt}{\Delta t}$$

$$= \lim_{\Delta t\to 0} \frac{\int_0^{t_k+\Delta t} h_i(t)\,dt - \int_0^{t_k} h_i(t)\,dt}{\Delta t} + \lim_{\Delta t\to 0} \frac{\int_0^{t_{k-1}} h_i(t)\,dt - \int_0^{t_{k-1}+\Delta t} h_i(t)\,dt}{\Delta t}$$