1014-34-1246 **Bonita A. Lawrence*** (lawrence@marshall.edu), Department of Mathematics, One John Marshall Drive, Huntington, WV 25755-2560, **Ralph Oberste-Vorth** (oberstevorth@marshall.edu), Department of Mathematics, One John Marshall Drive, Huntington, WV 25755-2560, **Kelli J. Hall** (hall142@marshall.edu), Department of Mathematics, One John Marshall Drive, Huntington, WV 25755-2560, and **Elizabeth R. Duke** (elizduke@gmail.com), Department of Mathematics, One John Marshall Drive, Huntington, WV 25755-2560. *Convergence of Solutions of Dynamic Equations on Converging Time Scales.* Preliminary report.

Consider the dynamic initial value problem

$$\begin{aligned} x^{\Delta} &= f(t,x), \\ x(t_0) &= x_0. \end{aligned} \tag{1}$$

We wish to examine the change in the dynamics of the solutions of (1) as the time scale varies, that is, we think of the time scale - the domain of the solution - as a parameter for a family of dynamic equations.

In particular, we will show that under certain conditions on f, the solutions of (1) will converge as the time scales converge. The convergence of the time scales will be with respect to the Vietoris topology on the hyperspace $CL(\mathbb{R})$ which consists of all time scales.

The convergence of solutions of (1) - which have different domains - will be addressed first. (Received September 27, 2005)