1070-39-176   **Edward Grove**, **Gerasimos Ladas** and **Evelina G Lapierre***, elapierre@jwu.edu, and **Wirot Tikjha**. *On The Piecewise Linear System*
$x_{n+1} = |x_n| + ay_n + b$, $y_{n+1} = x_n + c|y_n| + d$. Preliminary report.

We give a detailed analysis, complete with open problems and conjectures, of the global character of the solutions of the piecewise linear difference equations

$$\begin{cases} x_{n+1} & = & |x_n| + ay_n + b \\ \\ y_{n+1} & = & x_n + c|y_n| + d \end{cases} \quad , \quad n = 0, 1, \ldots$$

where the initial condition $(x_0, y_0) \in \mathbf{R}^2$ and the parameters $a, b, c, d \in \{-1, 0, 1\}$. (Received February 09, 2011)