Wireless Encryption Practices: Social Capital Factors and Diffusion of Innovation

John F. Hooker
Dr. Sorin A. Matei

Project goals

• To examine the relationship between level of social capital and use of encryption practices in residential wireless computer networks
• Compare influence of formal versus informal social capital

Findings

• Strong formal civic capital is an important predictor of adoption of encryption in residential wireless computer networks
• Individual (informal) social ties do not affect diffusion of encryption

Methodology

• Passive monitoring of wireless networks in Lexington, Kentucky (chosen for its similarity to many key general United States socio-demographic characteristics) in August 2003 and again in May of 2004 using GPS software and zoning maps to determine location and encryption status of residential access points
• Encryption data was aggregated into neighborhood-level variables in order to match our social capital data

Social capital

• A set of characteristics that determine personal and impersonal relationships with others
• Can be manifested in formal and informal ties that can work independently of one another in terms of influencing behaviors
• Measured through questioning residents to determine their level of neighborhood belonging (informal ties) and participation in community organizations (formal ties) and then aggregated to a neighborhood level

For more information, e-mail the authors at jfhooker@purdue.edu or smatei@purdue.edu or visit www.matei.org