# NHLSeattle Networked Support for National Hockey League Expansion

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In 2008, Seattle's National Basketball Association franchise, the SuperSonics, was relocated to Oklahoma City (Evans, 2008). However, one year later Seattle welcomed a new Major League Soccer club, Sounders FC. In its first season, the team led MLS in attendance and also reached the playoffs (Uhlman & Trail, 2012). With the National Hockey League potentially expanding to Seattle, it is worthwhile to determine whether the new team might experience similar local support. The Twitter handle for the prospective ownership group, @NHLSeattle, has more than 18,000 followers (Twitter, 2018) and already has 32,000 deposits for season tickets (NHL Seattle, 2018).

Through the lens of social network analysis, this study will investigate how the Twitter conversation surrounding the new potential franchise and the hashtag #NHLSeattle changes over time. This study has implications for how a potential new franchise can gather support and increase communication via social media.

Researchers have examined NHL expansion teams (Coghlan, 2017; Light, Chernin, & Heffernan, 2016). Coghlan (2017) investigated why the NHL will not consider Canadian cities for potential expansion due to the geographic concentration of Canadian cities in the eastern part of North America and the relative weakness of the Canadian dollar. Researchers used an epidemiological model to explain how NHL fan allegiance is spread via fan interaction. They found that a team's success rate is more important than location for attracting fans. However, a high locational quality including a large population, high average income, and a cold climate do give advantages to new teams that may struggle in the first few seasons (Light, et al., 2016).

Previous research has utilized social network analysis to determine how networks on Twitter are formed surrounding different users or hashtags (Naraine & Parent, 2016; Watanabe, Yan, & Soebbing, 2016; Yan, Pegoraro, & Watanabe, 2018a; Yan, Watanabe, Shapiro, Naraine, & Hull, 2018b). Yan et al. (2018b) examined the UEFA Champions League Final and found that the density of the network surrounding the hashtag #UCL grew over the course of the match.

Data will be collected using NodeXL (Social Media Research Foundation, Belmont, CA) software at three intervals surrounding the NHL winter meetings on December 3-4: the two days prior to, during, and following the NHL winter meetings. These intervals should represent the dynamic change of the Twitter network based on the leadup to the expansion decision, discussions during winter meetings, and the responses to the NHL's decision. Once the data are collected, researchers will utilize Gephi, a software that can calculate advanced network metrics to map the networks. After mapping the data, statistical measures including edges, density, eigenvector centrality, and betweenness centrality will be performed in order to compare the three different time periods.

It is anticipated that the network will have relatively heterogeneous communication before the meetings and become more homogenous with higher density as the meetings continue and a decision is reached. Any changes in the network will partly be determined by whether the NHL ultimately decides to award a franchise to Seattle.