**Title**

A new Framework for assessing “The Value” of an Amateur Weather Station: Enabled by Web bots

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**Abstract**

A personal weather station (PWS) is a set of weather measuring instruments that is owned and operated by an individual, club, association, or business. Even tho these stations might be less advanced as the professional stations, the amount of amateur stations that are active is much higher. With these PWS networks in full effect and still growing, the potential to use PWS data for weather forecasting or research purposes has gained popularity in the scientific field for its potential to ”fill data gaps”. However, since the stations are managed by “amateurs”, the “usefulness” and “value” of these stations are under questions. In this thesis, we tried to solve this by proposing a new way of assessing the “Value” of an amateur weather station in a citizen network. We utilized bots to extract all information about stations in the Netherlands and for the first time did a national analysis of PWS networks. Significant progress has been made in developing a framework to assess the value of the Dutch PWS network. The research process involved overcoming numerous obstacles, which have provided valuable insights and lessons for the future development of a more refined PWS network assessment system.