Introduction:
This contribution is about Precise Point Positioning (PPP) enabled real-time kinematic (RTK) carrier phase ambiguity resolution. Integer ambiguity resolution for a single receiver will become feasible if corrections from a CORS network are applied to the single-receiver phase (and code) data. However, PPP-RTK requires a proper definition and quality of the PPP-user received network corrections. After an adequate elimination of the rank deficiencies in the un-differenced observation network equations, the PPP-user corrections can be provided such that the user ambiguities become integer, thus making PPP-user integer ambiguity resolution and consequently precise (cm-level) positioning possible.

Method:
A proper handling of these corrections implies that the PPP-user should take their uncertainty into account as well. This requires that we must be able to capture these uncertainties in an adequate and concise way. The topic of the present contribution is therefore to provide an accuracy analysis of the PPP-RTK network corrections. This will be done both analytically as well as empirically.

Results & conclusion:
An analytical closed-form expression for the uncertainty of the network corrections will be derived, thus enabling the user to a priori weigh these corrections as function of the network configuration. In addition, empirical tests are carried out so as to analyse the performance of our formal accuracy measures in predicting the actual uncertainty of the corrections. This will provide the PPP-user with an efficient way of accounting for the network corrections’ quality.