1108-57-549Hans U. Boden, Anne Isabel Gaudreau and Eric Harper*, eharper@math.mcmaster.ca, and
Andrew J. Nicas and Lindsay White. Virtual Knot Group Duality and Almost Classical
Knots. Preliminary report.

A virtual knot can be viewed as an equivalence class of virtual knot diagrams. We can associate to any representative virtual knot diagram an Alexander numbering. We will use this Alexander numbering to show that the virtual knot group VG_K , the extended knot group EG_K of Silver and Williams, and the quandle knot group QG_K of Manturov, are determined by the reduced knot group \overline{G}_K . In particular, we will show that EG_K and QG_K are isomorphic. The notion of an Alexander numbering can be extended to virtual knots. Virtual knots that admit Alexander numberings are called almost classical knots. We will show that for almost classical knots, the virtual knot groups above depend only on the classical knot group G_K . This leads us to study the Alexander invariants of G_K for almost classical knots. (Received January 20, 2015)