In a “direct/inverse” alignment system, the agreement morphology that indexes a particular nominal is determined by the nominal’s rank on the person hierarchy rather than by its grammatical function. Algonquian languages are often seen as the prototypical example of such a system, but from a diachronic perspective, the Algonquian direct/inverse system is not particularly old: internal and external evidence both point to a reconstructed ancestor in which the agreement morphology shows a simple nominative/accusative alignment pattern. So where did the direct/inverse pattern come from, and how did it quickly gain such a pervasive role in the agreement system? In this talk, I will outline the answers to these questions and argue that they lead us to a simple understanding of direct/inverse alignment in Algonquian: inverse marking appears whenever two adjacent agreement slots are linked to the same argument, or, in terms of generative theory, whenever two probes agree with the same goal. This approach places inverse marking in the same family of “vanishing phi” phenomena as spurious clitic forms in Romance and disappearing agreement markers in Bantu.