A polynomial \( p(z) = p(z_1, \ldots, z_d) \) is called \( \text{stable} \) if \( p(z) \neq 0 \) for \( z \in \mathbb{D}^d \), where \( \mathbb{D} \) is the open unit disk in \( \mathbb{C} \) and \( \overline{\mathbb{D}} = \mathbb{D} \cup \mathbb{T} \) is its closure. It is an open question whether every multivariable \( \text{stable} \) polynomial \( p(z) \) with \( p(0) = 1 \) can be written as

\[
p(z) = \det(I - KZ(z)),
\]

where \( Z(z) \) is a diagonal matrix with coordinate variables on the diagonal and \( K \) is a strict contraction. For one and two variable polynomials such a representation always exists; in one variable it is an easy consequence of the fundamental theorem of algebra, while in two variables it follows from a result by A. Kummert. As a variation, we show in this paper that independent of the number of variables every \( \text{stable} \) multivariable polynomial \( p \), with \( p(0) = 1 \), has a determinantal representation

\[
p(z) = \det(I - M(z)),
\]

where \( M(z) \) is a matrix valued rational function with \( \|M(z)\| \leq 1 \) and \( \|M(z)^n\| < 1 \) for \( z \in \mathbb{T}^d \) and \( M(az) = aM(z) \) for all \( a \in \mathbb{C} \setminus \{0\} \). In fact, the existence of such a representation characterizes \( \text{stable} \) polynomials. (Received September 14, 2013)