ABSTRACT

TITLE:	Extension of Tight Frames in Rn
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ABSTRACT: Frames are redundant sets of vectors in a Hilbert space, that have lower and upper frame bounds A and B respectively, which yield one natural representation for each vector in the space, but which have infinitely many representations for a given vector. A frame is considered tight when its lower and upper frame bounds equal each other, A=B. The problem faced is whether or not we can extend a tight frame from any Rn to Rn+1 in an algorithmic way and have the new frame retain its tightness. What we found was an affirmative, geometrically meaningful solution to this problem, so yes, we can extend a tight frame into Rn+1 and have the resulting frame still be tight.