$M^8 - H$ duality

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1. derives from $E^8 - E^4 \times CP_2$ duality for 4-D surfaces of octonionic space o stating that if one has an associative/quaternionic 4-surface X^4 in E^8, one can map it it to a surface of $E^4 \times CP_2$ by assigning to a point of $X^4 \subset E^8$ a point (e_1, s) of $E^4 \times CP_2$, where s is the point of CP_2 characterizing the 4 tangent plane of X^4 and e_1 is obtained by projecting the point e of E^8 to the 4D tangent space of E^8. No $E^8 = E^4 \times E^4$ decomposition of is need as believed originally.
2. is obtained by replacing octonions O with complexified octonions having interpretation as complexified tangent space of minkowski space M^8 and states that if one has an associative/ quaternionic 4-surface X^4 in M^8 one can map it it to a surface of by assigning to $M^4 \times CP_2$ a point m_1 of $X^4 \subset M^8$ a point (m_1, s) of $M^4 \times CP_2$, where
   (a) m_1 is projection of m_1 to the tan gent space $M^4 \subset M^8$ of X^4. This makes the map unique.
   (b) s is the point of CP_2 characterizing the 4 tangent plane of X^4 at m_1.
3. generalizes to coassociative/ coquaternionic context which is nice since both associativity and coassociativity are needed in TGD.
4. inspires the conjectures that
   (a) the image of associative surface of M^8 is associative surface in H (this need not be true).
   (b) associative and coassociative surfaces are preferred extremals of khler action.
5. involves also commutativity and cocommutativity. commutative and cocommutative 2 surfaces or space time surface in $X^4 \subset M^8$ would correspond to string world sheets and par tonic 2surfaces in $X^4 \subset H$ emerg ing naturally from welldefinedness of em charge for the mo des of KählerDirac action and from strong form of holography.