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S. Kaliszewski* (kaliszewski@asu.edu), **Magnus B. Landstad** and **John Quigg**.

Tensor-product coaction functors.

Recent work by Baum, Guentner, and Willett, and further developed by Buss, Echterhoff, and Willett introduced a crossed-product functor that involves tensoring an action with a fixed action (C, γ) , then forming the image inside the crossed product of the maximal-tensor-product action.

Here we discuss an analogue for a fixed coaction (D, ζ) of a discrete group. Composing our tensor-product coaction functor with the full (action) crossed product of an action reproduces the crossed-product functor of the above-mentioned authors. We show that every such tensor-product coaction functor is exact, and that the tensor-product coaction functor associated to the dual coaction on $\ell^\infty(G) \rtimes G$ is minimal.

Our techniques involve a “ G -balanced Fell bundle” $\mathcal{A} \otimes_G \mathcal{D}$, whose cross-sectional C^* -algebra embeds faithfully in the maximal tensor product $A \otimes_{\max} D$. (Received September 16, 2019)