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The final goal of this talk is to show how some of the well known imprimitivity theorems (as Raeburn’s Symmetric Imprimitivity Theorem) can be extended to partial actions. To that end we define proper partial actions following Buss-Echterhoff and Meyer’s definitions of proper actions on C^* -algebras. After that we construct, starting from a “proper” partial action α of G on A , a fixed point algebra $\mathcal{F}^\alpha(A)$ and a $\mathcal{F}^\alpha(A) - A \rtimes_\alpha G$ equivalence bimodule X_α .

Under suitable assumptions, given a C^* -partial action β of H on A commuting with α , there exists a unique partial action $\tilde{\beta}$ of H on $\mathcal{F}^\alpha(A)$ canonically induced by β . Using F. Abadie’s notion of Morita equivalence of partial actions (as done by Curto, Muhly and Williams for global actions) we show $\mathcal{F}^\alpha(A) \rtimes_{\tilde{\beta}} H$ is Morita equivalent to $\mathcal{F}^\beta(A) \rtimes_{\hat{\alpha}} G$.

In the second part of the talk we relate our imprimitivity theorems for partial actions to the problem of constructing a globalization for a given partial action on C^* -algebra (or a Hilbert module). We present a necessary and sufficient condition for the existence of globalizations and, finally, we use it to investigate to what extent our imprimitivity theorems can be obtained by using Buss-Echterhoff’s theorems and globalizations of partial actions.

Joint work with Fernando Abadie (Advisor, Universidad de la República, Uruguay) and Alcides Buss (Advisor, Universidade Federal de Santa Catarina, Brasil)..