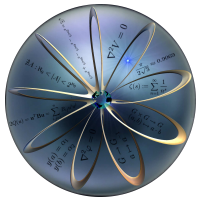

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representations of locally compact groupoids

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Defines	Haar system triple

Definition 0.1. Let G_{lc} be a locally compact (topological) groupoid endowed with a Haar system $\nu = \nu^u, u \in U_{\mathsf{G}_{lc}}$. Then a *representation* of G_{lc} together with the its associated Haar system ν is defined as a *triple* $(\mu, U_{\mathsf{G}_{lc}} * \mathcal{H}, L)$, where: μ is a *quasi-invariant measure* defined over $U_{\mathsf{G}_{lc}}$,

$U_{\mathsf{G}_{lc}} * \mathcal{H}$ is an analytical, fibered Hilbert space or Hilbert bundle over $U_{\mathsf{G}_{lc}}$, and

$L : U_{\mathsf{G}_{lc}} \longrightarrow \mathbf{Iso}(U_{\mathsf{G}_{lc}} * \mathcal{H})$ is a Borelian (or *borelian*) groupoid morphism whose restriction on $U_{\mathsf{G}_{lc}}$ is the *identification map*, that is, $U_{\mathbf{Iso}(U_{\mathsf{G}_{lc}} * \mathcal{H})}$ is being identified *via* L with $U_{\mathsf{G}_{lc}}$. Thus,

$L(x) = [r(x), \tilde{L}(x), d(x)]$,

where $\tilde{L}(x) : \mathcal{H}(d(x)) \longrightarrow \mathcal{H}(r(x))$ is a Hilbert space $\mathcal{H}$ isomorphism.