

THE LUC COMPACTIFICATION OF A LOCALLY COMPACT GROUP AND ITS TOPOLOGICAL STRUCTURE

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We present a construction of the LUC compactification of a locally compact group G as a quotient space of the set of ultrafilters on G . We then use this presentation in a proof of the local structure theorem for G^{LUC} , which gives a topological description of neighborhoods of each point. Finally results on the injectivity property of multiplication on G^{LUC} are obtained and a special condition on G under which injectivity property can be extended is also examined.