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Graph spaces of first-order linear partial differential operators

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**Abstract.** Symmetric positive systems of first-order linear partial differential equations were introduced by K.O. Friedrichs (1958) in order to treat the equations that change their type, like the equations modelling the transonic fluid flow. Recently, some progress in their understanding has been made by rewriting them in terms of Hilbert spaces, characterising the admissible boundary conditions by intrinsic geometric conditions in the graph spaces. In this paper we streamline the available proofs of the properties of graph spaces (most completely presented by M. Jensen (2004)), providing some additional results in the process; thus paving the way for further study of Friedrichs’ systems.