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Isidore Fleischer* (fleischi@CRM.UMontreal.CA), CRMUniversite de Montreal, C.P.
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Preliminary report.

The refinement integral already surfaces in implicit form in Darboux's reformulation of the Riemann(-Stieltjes) integral, although the recognition that the upper and lower integrals are refinement depends on the subsequent convergence theory of E.H. Moore, who also observed that the Lebesgue integral could be construed as refinement. Shannon's definitions of information theory notions for continuous distributions can be corrected, and the statisticians' formal integrals made sense of, as refinement integrals. A substantial study of the refinement integral was carried out by Kolmogorov in Math. Ann. 103(1930) 654-696 – he integrates real-valued integrands of a subset argument on a domain of subsets closed only for intersection. Some extension and application of this basic source will be presented. (Received July 04, 2000)