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High-Precision Diagnosis of Malfunctioning Apparatus allowed by Serendipity SAAMI J. SHAIBANI, Instruction Methods, Academics & Advanced Scholarship (IMAAS) — "An electric brake has a resistance of 376 ohms and operates at 90 volts. If the only supply available is 115 volts, show how the brake can still be made to work." The preceding exercise is the theoretical counterpart of a practical problem involving a platform elevator for the physically-challenged. The elevator brake had been inoperable for a considerable period due to an intractable ambiguity, even after two independent technicians working together had established that some components might have been installed improperly. It so happened that the author was on hand[1] and he suggested an experimental approach for a remedy that could be checked if some standard equipment were provided. Once this item was located, his testing confirmed the viability of the proposed remedy, resulting in a prompt repair and a much-needed return to service. This good outcome was achieved by integrating theory and practice to produce maximum synergy.

[1]note: during a visit to the educational institution concerned.

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