We have known for twenty years that quantum computers would have unique powers for solving certain classes of computational problems. Throughout these twenty years, workers have striven to identify a physical setting in which high-quality qubits can be created and employed in a quantum computing system. Very promising devices have been identified in several different areas of low-temperature electronics, namely in superconductor and in single-electron semiconductor structures (e.g., quantum dots). Rudimentary efforts at scale-up are presently reported; even for modules of 10 qubits or so, many imperfections become evident, and it is not clear how scaling to larger systems should go. In this talk I will outline two major lines of work that we have undertaken to tailor and refine couplings in qubit systems. First is a critical examination of the ubiquitous Rotating Wave Approximation; we derive a new series which defines a family of effective Hamiltonians that go systematically beyond the RWA. In the second half I will explain a new layout for qubits and resonators that we have proposed, which should significantly improve the modularity and controllability of couplings in multi-qubit layouts.