

The Engineering to Medicine Metamorphosis

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Abstract:

We EDA engineers are justifiably proud of the tremendous success that integrated electronics has enjoyed over the last 50 years. After all the world has been irrevocably changed by the pervasive connectivity and computing capability we have enabled. Today's smart devices are just the beginning of an avalanche of "intelligence" that will be enabled by the internet of things and further change our lives for the better. But it can sometimes be difficult to explain to a layperson what part we have played in this narrative, somehow a 2% improvement in routing density or simulation accuracy sounds quite far from "the next iPhone". As technology slows down, matures, and the industry consolidates, we are presented with opportunities for applying our talents for the analysis, modeling, optimization and solution of difficult large scale problems in adjacent fields. This talk is about one such opportunity in the area of radiation therapy, where Medical Physicists work hand-in-hand with Oncologists to provide life-saving treatments for Cancer. Making the transition from EDA to Medicine required some significant sacrifices and humility -but the end result is a commercial and scientific success and a far greater level of relevance to people's lives.