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## There is no money to ideas "crazy"

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*Judy Estrin points out the failure of the new system of innovation in the U.S.. Gordon Bell says the situation is precisely the result that the health system.*



Funding for research and development by the U.S. government is not to meet the innovation needs of the country, according to Judy Estrin, a pioneer in the development of network technology and CEO JLABs.

The former CTO of Cisco said the commemorations of the 40th anniversary of Ethernet, the Ethernet Innovation Summit (held this week in Mountain View, Calif.), the support for this technology would not be possible today.

The researcher emeritus at Microsoft, Gordon Bell, however expressed another opinion: the fact that there are researchers without funding is

just the result of the system is working well and produce many innovative projects.

But Paul Grams, the subdivision of exploration technology NASA also says that only appears financing for projects with expected return than five years. The so-called basic research and long-term funding needs.

"Funding is now very different and does not address all the needs," emphasizes Estrin. "There is no funding available to spend on those initial ideas and crazy. It was a role played by laboratories such as Bell Labs, less discovery and friendlier to pick up, invent, make proofs of concept and develop an idea to her work. "

According Yogan Dalal, researcher who contributed to the evolution of Ethernet, university or companies have to find ways to support these projects financially, because companies venture capital they can not bear and the other companies have a different logic. Research laboratories, such as Xerox PARC, agents are no longer in the current environment, reminiscent of the partner of Mayfield Fund.

Lack of basic research to develop foundations that can lead to disruptions in scientific knowledge, says. "When I was at Xerox, the researchers were not concerned with creating an idea and then go looking for millions and millions of dollars of venture capital. This came after the innovation has been created. Were free to develop whatever they wanted and cause real disruptions," said Dalal.

Taking the example of Apple, Estrin explains that company does not assume the role of funding basic research and long-term, despite being innovative. But as pointed out Bill Spencer, former director of PARC, basic research has other results without innovation.

Fulfills a training role, a process in which "professionals saiem such training as will best people and disseminate ideas." For Spencer, it is important to leverage the potential benefits of globalization and basic research.

Estrin agrees but he warns: "stop doing in the country is a bad idea." The technologist does not believe in adopting ideas developed in other countries and from other investigations or to create products. The main reason is that "we work well but from a position of strength."

### **Interdisciplinary brings complexity**

Estrin explores another dimension of the problem: "financing decisions are complex because the issues are very interdisciplinary." In his view, no longer able to finance "boxes or homogeneous areas of research."

According to her, today's problems require interdisciplinary solutions. Reference points as the Bell Labs as an environment able, once, to attract very interdisciplinary researchers.

For the researcher, the private sector has its place and gives as an example the Gates Foundation. However, it considers that there has to be a balance with other sources of funding, because it is not just the amount of money, but also to decide what to fund.

According to Estrin, the industry can not spend money for long-term research.

In addition to these concerns, the investigator Bill Inglês - whose hardware design contributed to the emergence of the mouse - to alert another risk: "there are issues of research funding playing a political role." And that's bad, he says.

An intervention to end the conference, Bob Metcalfe, co-inventor of Ethernet, that, to solve the various problems, it will be interesting to gamble on universities than in research laboratories such as Bell Labs enormous. "Students are the main vehicles for innovation," he argued.