Interactive Phone Text:

Interactive Phone Text (IPT) is a technology that would allow users of phone call centers, phone billing systems, and any other menu-based phone software to interact more quickly and conveniently with that system by using their phone keypad to navigate a textual menu displayed on their screen. Such a system would benefit both company and consumer, lowering call lengths (and thus decreasing costs and/or increasing capacity) as well as increasing convenience. Though there are many initial applications in supplementing existing IVR (Interactive Voice Response) systems, there is also a potential market for creating new interactive services.

Motivation and Goals:

To research, discover, and demonstrate the technical viability of the Interactive Phone Text concept. Ascertaining the likelihood of success, without the risk of full investment.

Although simple and straightforward in terms of its function and utility, an implementation of this concept would depend on many separate areas of technology. Substantial software and possibly hardware development at both ends of the line (caller, and callee) would be required, as well as potentially interfacing with a myriad of third-party platforms and libraries. Very little novel research in any one domain would be necessary, but assembling a complete and functioning system would require the design, implementation, and integration of several definable but currently-undeveloped pieces of technology.

Because the core functionality of this potential product depends on a few missing pieces of technology, the best way to minimize the associated risk is to build them first. The goal of this research project is to remove these unknowns as soon as possible, by filling in the technical pieces. By experimenting, building prototypes, and answering these questions now, a subsequent commercial venture based on this product would benefit and have an even more assured chance of success.

Results:

Example implementations of the components that make up the IPT system, in enough detail and functionality as to prove the product's technical viability. Although its expected that much of this may be changed or validated in the earliest stages, these pieces include:

* IPT Client
  Interacts with the user via a display and keypad, the IPT Server via an IPT Transport, and facilitates and provides bi-directional communication capabilities between the user and the Server to the IPT Program.

  Example implementations could be a piece of software running on a modern mobile phone, or even a hardware implementation. A one-chip IPT package which connected to a phone and an inexpensive LCD screen could have nearly limitless availability, for example.

* IPT Server
  Running at the callee's end, the IPT Server identifies and connects with incoming IPT Clients via an IPT Transport, and manages or integrates with the backend application with which the calling user is interacting.

  Implementation would be an add-on module, which works with an existing market-leading telephony server solution and which adds IPT. Ie: TERAVoice, Asterisk, EasyIVR, &c.

* IPT Transport
  The technical means by which the IPT Server communicates with the IPT Client. There are different possibilities both out-of-band (digital data

calls, SMS) and in-band (a sort of acoustic modem).

Implementation would include research and design of a protocol, exploration into the pros and cons of the different transports and pieces of the IPT Client and IPT Server which speak using it.

* IPT Program

Running somewhat "between" the user and the call center, the IPT Program refers to the interactive system that the user navigates. In the example of a phone menu tree, the IPT Program is the logic that specifies the tree hierarchy. In an example of a hotel reservation service, the IPT Program is what checks availability and returns a time.

Since this is only necessary as a proof-of-concept placeholder--real IPT Programs would be developed by customers--implementation would only need to be something which demonstrated the basic capabilities of the system.

Costs and Time:

Because a functioning example of IPT requires development and integration of custom components for a variety of proprietary platforms, useful results lie outside the realm of casual experimentation. All of the platforms have specific hardware which must be purchased for development, as well as required licensing fees. Many also have custom software tools which must be purchased and then learned. While far from prohibitively expensive from a business standpoint, just "getting all the tools" necessary to build such a system requires some investment.

After some preliminary research into the already known specific costs, I believe that this project could be completed given $100,000 and over about 9 months of time. These numbers are chosen to be both aggressive but also *highly* unlikely to go up. It includes the costs of purchasing all necessary computer equipment for research and development, phone equipment, phone services, telephony server, software development licenses, &c. It also includes the total engineering costs for managing and building *all* necessary components to prove IPT viability.

Ownership & Conclusion:

Because this research project precedes actual corporate development, much of the gain of pursuing a marketable technological idea via early investment in a start-up is obtained at a fraction of the investment cost. Specifically, paying initially to know with *certainty* that the product works and how one would build it, without paying for new company and product marketing development.

I think that since I would be unable to pursue this on my own, substantial preference would be reasonable to trade for sponsorship. Any future company based on or using this technology would give you exclusivity to match any offer given during its first round of funding. In addition, from the end of this project to one year after, you would be given 100% exclusivity in any decision to move forward or not. All development and investment during that time could be completely controlled by you.