

GA Questions for the experts

1. Projections

- a. Which NBIC technologies do you see being put into practice in the near future?
- b. Where do the cognitive applications stand now? Are they closer than we think?
- c. Could nanotechnology be used to control other natural phenomena, i.e., earthquakes, hurricanes, drought?

2. Balanced information.

- a. Is there currently total disclosure to the public of values and risks?
- b. Is the public getting all the information, good and bad?

3. Quality control.

- a. How is quality control done now? What are the failure rates? How would it be done with the projected future technologies?
- b. What is the test protocol for the devices now? Who are they being tested on and how?
- c. How is safety currently being guaranteed? Will those methods work with the projected technologies?
- d. How are risks being assessed? From statistical models or known pathologies?

4. Possible side effects.

- a. Could the devices cause allergic reactions?
- b. What do we know about the physical effects and risks of the implants?
- c. Could implanted mental devices cause the person to become anti-social?

5. Monitoring and safeguards

- a. How will use of these techniques be monitored?
- b. Who will keep records on the technology? The private sector? Government?
- c. How can we make sure that they are used for benefit not harm?
- d. How would thresholds for safe use be established, for example, with the techniques that allow persistence in combat for soldiers?

6. Ownership.

- a. Since NBIC applications are converging technologies, will funding or some other factor give automatic rights to the patents?

7. Long term effects.

- a. Are there any scientifically based theories about the long term outcomes of genetic manipulation?
- b. What do we know about long term effects on the human body?
- c. Are there projections of the effects on population of various repair/regenerate or other life-extension applications?
- d. Will changes in one generation affect the next?

8. How the technologies will work.

- a. Will the devices be custom-built, individualized? Would the artificial limbs be custom-made?
- b. Are there currently safeguards in access to the information generated by the sensing devices? How will that change as new devices are added?
- c. What impact will one enhancement have on the rest of the organs?
- d. How would the wifi telepathic technique actually work? Would/do we need additional towers to use the (wifi) telepathic technique?
- e. How would implanted technologies be maintained? Who would do that – doctors or mechanics?
- f. How would the technologies be manufactured? Are there new processes involved and what do we know about the possible risks in manufacturing?
- g. Would it be possible to “hack” into the brain chip and implant a computer virus or disease like Alzheimers?
- h. Would the various devices be removable, for example, the bionic eye? How easy would it be to remove the implants?

9. Your personal reactions

- a. What is your experience with FDA and what is your view on its ability to regulate the NBIC technologies? Do you think a new agency is needed?
- b. What is your biggest fear or concern about these technologies?
- c. Would you recommend this technology for your own kid?