

Year 11 Planning My Career Profiles

1. Body Part Maker

Due to the huge advances being made in bio-tissues, robotics and plastics, the creation of high performance body parts - from organs and limbs - will soon be possible, requiring body part makers, body part stores and body part repair shops.

Possible Emergence as a Profession: 2020

A Day in the Life

A day would typically start with scanning the most critical or urgent new requests for repairs and complete body parts, and checking on component deliveries to help schedule the day's work plan. Requests would be reviewed to determine whether entire limbs or organs were required or just component subsystems (e.g. a new kneecap) and where multiple copies were required e.g. for athletes and soldiers returning to combat. A visit to the incubator would follow to check on the progress of body parts currently being 'grown' and to perform staged quality control tests of all existing growth culture batches. Starting new growth batches would be the next priority.

The body part maker works with computer aided design, including online DNA modelling and biomechanical simulations, DNA encoding and DNA modification. A core skill is the selection and combination of biological materials to grow organ parts on "scaffolding", which is also modelled by the body part maker, based on computer-generated templates. While a typical organ such as a liver or kidney might be grown, other parts such as an arm would involve the complex integration of a nano-engineered skeleton, high performance robotic joints, fibre-optic nerves, artificially grown skin, synthetic flesh and muscles.

Much of the day would be spent working at the laboratory bench designing and assembling body parts and testing their performance under various conditions as specified by the owner. Throughout the day the body part maker would be engaged in video conferences with surgeons around the world to discuss their requirements, provide advice on appropriate body part design and review the results of past body replacement surgeries. Dedicated time would also be set aside to review the latest information on new techniques and research provided by the body part maker's professional association.

2. Nano-Medic

Advances in nanotechnology offer the potential for a range of sub-atomic 'nonscale' divide, inserts and procedures that could transform personal healthcare. A new range of nano-medicine specialists will be required to administer these treatments.

Possible Emergence as a Profession: 2025

A Day in the Life

Applications for nanomedicine range from body part replacement through tissue repair and gene therapy. A typical day for a skilled nanomedic might include patient consultation, time in surgery, ward rounds, review of past surgeries, complex modelling to devise appropriate nano-solutions, work in the laboratory to grow and engineer suitable nanomaterials, teaching and continuous professional development. A Nano-medic would typically work as part of a team on rotating shifts, and be on call. Training is extensive and involves study of the human physiology, traditional medicine, the science underpinning nanotechnology, and the effects of nano materials in humans.

Because of the range of emerging applications of nano techniques and technologies, Nano-medics would need a deep understanding of the biological, chemical, electrical, magnetic, mechanical and optical properties of nanomaterials and of the human body. This would need to be coupled with a deep understanding of information processing and cognitive mechanisms of the human body. This multi-disciplinary expertise will be critical to engineering nano-medical solutions that perform as well or better than the organs or body parts being repaired.

Typically, a Nano-medic might be part of an expert team in a one of a handful of specialist nanomedicine centres around the country. Individual team members might specialise in particular areas such as nano materials and tissues, cancer diagnostics and treatment, drug delivery or computational modelling of nano-medical interventions. Patient conferences on nanomedical interventions might typically involve specialists joining in via a video link from a range of remote locations.

3. Pharmer of Genetically Engineered Crops and Livestock

Pharmers are the next generation on farmers who will raise crops and livestock that have been genetically engineered to improve food yields and 'grow' therapeutic proteins, pharmaceuticals and chemicals.

Possible Emergence as a Profession: 2015

A Day in the Life

The day begins with supervising the changeover of the security teams from the night shift, scrutinising the CCTV monitoring systems and the automated event and monitoring logs, which record the status of each crop or group of livestock. Each crop or animal would then be evaluated for the progress against the relevant supply contract and treatments would be adjusted accordingly. Data is fed back automatically on each "crop" or animal to the food processor, abattoir, distributor, pharmaceutical company or chemical firm who will be the next step in the value chain.

Sophisticated computer models that draw information on temperature, atmospheric conditions and plant health from an array of biosensors will be used to determine harvesting of crops. This morning, we see that the GM "cancer cure" sunflowers have made good progress and our models suggest they are on track for harvest and processing tomorrow - quality and quarantine process as need to be implemented today in preparation.

Pharmers may come from a variety of backgrounds including chemical sciences, pharmaceuticals, medicine, and even traditional farmers who have retrained in the relevant scientific disciplines.

4. Old Age Wellness Manager/Consultant Specialists

Drawing on a range of medical, pharmaceutical, prosthetic, psychiatric, and natural fitness solutions to help manage the various health and personal needs of the aging population.

Emergence as a Profession: 2020

A Day in the Life

The wellness manager will bridge the clients' needs for medical care, housing, transport, training, skills development and social care, as well as managing quality of life and providing financial advice. In order to stay up to date, our wellness specialist dedicates up to 20% of their time to researching and learning about all the latest developments that could benefit their practice. These could encompass new pensions legislation, exercise and diet regimes, medical advances and new psychotherapeutic interventions. A typical day might start with video and telephone conversations with clients who are on a retainer and who require regular coaching, guidance and motivation.

The core of our specialist's time is spent consulting with, advising and treating existing and prospective clients. Although some clients are happy for all services to be provided via video link and other virtual mechanisms, the bulk place a value on human contact and hence prefer face-to-face consultations. Our consultant makes a number of home visits but also likes to see patients in their consulting rooms where more specialist diagnostics and treatments can be performed. Groups of self-employed wellness specialists may share treatment rooms. They may also have shared administrative support to perform a range of tasks for clients ranging from ordering the weekly groceries through to liaising with medical services and performing personal banking. Wellness management networks may spring up where each consultant has a particular specialty such as medical care, exercise, coaching and financial advice.

The nature of the work means that hours could be long, with home visits being performed at the start and end of the day for clients who are still working. The consultant's personal background and qualifications will determine the range of services they can perform. Hence those who are not medically trained may need to work in partnership with medical specialist to provide the full range of services required by clients. Others may have qualified through new models of medical training that enable them to perform certain medical tasks and interventions such as drug prescribing. While some clients may pay for themselves, others may receive the service as part of their retirement package or as part of the support provided to enable them to carry on working part normal retirement age.

5. Memory Augmentation Surgeon

This is a new category of surgeons whose role is to add extra memory to people who want to increase their memory capacity. A key service would be helping those who have literally been overloaded with information in the course of their life and simply can no longer take on any more data - thus leading to sensory shutdown.

Possible Emergence as a Profession: 2030

A Day in the Life

A memory surgeon would be able to work as much or as little as they wanted. Whilst most would work privately, some would be employed by public health services to help those in the greatest need who cannot afford treatment themselves. Leading companies would increasingly hire surgeons to enhance the capabilities of their top performers, and raise the standards of the entire workforce.

A typical day would involve consultation with prospective patients - including review of an extensive battery of cognitive, psychological, neurological and emotional tests. These will help determine if patient is suitable for treatment and the appropriate interventions to make. Each intervention would be designed using sophisticated computer modelling tools and would need to be peer reviewed by two other memory augmentation surgeons and submitted for approval by the Neurological Augmentation Authority before treatment can be performed. Typical patients could be in surgery for many hours given the complex nature of the procedures involved.

Considerable time will be spent communicating with data information filter specialist, security experts, and consultants on issues such as the design of virus protection and human firewalls. Surgeons would be expected to undertake continuous professional development, stay abreast of the latest thinking and practice in their field and have their performance reviewed and qualifications renewed regularly. Surgeons will have to be part of a professional association and pay a significant annual contribution to association research, promoting the profession, trying to address the ethical outcry and influencing the debate around memory enhancement. The leading surgeons will command six figures or more for a single surgery and will be popular figures in the media. Memory augmentation surgeons will have the highest insurance premiums of any medical practitioner - with an occupational hazard being the risk of being sued for memory loss.

6. 'New Science' Ethicist

As scientific advances accelerate in new and emerging fields such as cloning, proteomics and nanotechnology, a new breed of ethicist may be required. These science ethicists will need to understand a range of underlying scientific fields and help society make consistent choices about what developments we allow. Much of science will not be a question of can we, but should we.

Possible Emergence as a Profession: 2015

A Day in the Life

Science ethicists may come from a range of fields including the new sciences, ethics, philosophy, religious studies, sociology and journalism. The field will be quite widely spread - ranging from essayists to those who focus more on classroom teaching or helping governments, scientists and corporations make tough choices about the bounds of acceptable practice in each discipline.

Much of the ethicists work will involve extensive study of the underlying disciplines and the arguments for and against development in each field. Regular physical and virtual meetings will take place with leading scientific practitioners, government legislators, corporate representatives and lawyers. Ethicists may also visit the R&D centres where the research is taking place to form first hand opinions on the advances under discussion.

Participation in live and virtual lectures, workshops and public debates will be common. Some ethicists may be funded by the government and/or corporations. Their role will be to take the ethical debate into schools and universities to help students understand the issues. For students and society as a whole, a responsibility for ethicists will be to equip citizens with the decision making tools to enable them to evaluate the ethical challenges posed by scientific advances in a rational and consistent manner. Some ethicists may have academic tenure. A more controversial possibility is the idea of contract ethicist who hire themselves out to science companies to help them anticipate ethical challenges and frame their offerings in the most ethically acceptable light.

7. Space Pilots, Architects and Tour Guides

With Virgin Galactic and other pioneering space tourism, space trained pilots and tour guides will be needed alongside architectural designers to be able to enable the habitation of space and the planets. Current architectural projects at the Sasakawa International Centre for Space Architecture (SICSA) at the University of Houston include a greenhouse on Mars, lunar outposts and space exploration vehicles.

Possible Emergence as a Profession: 2015

A Day in the Life

Initial developments in space tourism will involve two to three hour sub-orbital flights. This will gradually develop into larger trips - possibly extending flights lasting several days or weeks for a visit to an orbiting space station or a distant planet. On the day of each flight, pilots will undergo rigorous health and psychological checks to ensure they are fit to travel. The next stage will be an exhaustive visual and automated programme of technical and security checks with the engineering team. The passenger manifest will be discussed in detail with the entire in-flight crew to understand exactly who is on board. Space flight is likely to remain the domain of the very wealthy for some time to come - everyone will believe himself or herself to be a VIP!

The flight itself will be handled largely by autopilot for most of the journey but the pilot and co-pilot will need to be fully in command throughout the trip. Flight rosters will typically involve extensive rest periods during and after each trip. Even days off will include regular physical and mental strength exercises to ensure the pilot is able to deal with the stresses of frequent space travel.

SICSA currently offers the only Masters of Science in Space Architecture. SICSA explains that Space Architects, like their earthbound counterparts, must address "the total built environment, not just its component elements and systems." Hence designing solutions for space involves a "broad understanding of the issues and requirements that impact overall conditions of the space environment upon construction processes and material options; physiological, psychological, and sociological impacts of isolation and stress; and human factors design issues associated with human adaptation and performance in weightless and partial-gravity habitats." A space architect's customers could include governments, private developers, manufacturers and, in time, firms such as banks, hotel groups and retailers.

Space tour guides will draw on cosmology, astronomy, space science, geography, history and geology to help passengers get the most out of their journey. While the factual side of the tour is important, space guides need to be excellent storytellers and imaginers to help inspire their charges

and encourage them to experience the true awe of space travel. Regular tour guides will need to undergo a similar level of physical and mental preparations and testing as pilots before each trip.

8. Vertical Farmers

There is a growing interest in the concept of city based vertical farms, with hydroponically fed food being grown under artificial growth-enhancing lighting in multi-storey buildings. These offer the potential to dramatically increase farm yield and reduce environmental degradation. The managers of such entities will require expertise in a range of scientific disciplines, engineering and commerce.

Possible Emergence as a Profession: 2015

A Day in the Life

Many models can be envisaged for how such farms could be run. One would involve a professional farm manager supported by a mix of human and robotic farm hands and specialist scientists. Another model envisages such farms being part of new community developments with the local residents donating time as farm labour in return for a regular supply of fresh produce and a share of the commercial returns from the farm.

A typical day would typically start with motoring plant health, atmospheric conditions and crop growth. A number of routine daily tasks would be performed including tending the plants, planting, harvesting, irrigating the various plants, waste recycling and maintaining the ventilation equipment and other machinery. Each day, time would be dedicated to working on new developments in special areas of the farm given over to experimentation on new crops and growing techniques.

A key element of the farm manager's responsibility will be maximising the commercial returns on the crops planted. Whilst some farms may be owned by or tied to particular retailers, produce wholesalers or food processors, others may operate on an independent basis. Much of the commercial effort will be invested in identifying customers to pre-book capacity or to selling crops on the open market once produced. Once proven, successful farms with a record of achieving high yields may be able to auction their capacity to the highest bidder.

9. Climate Change Reversal Specialist

As threats and impacts of climate change increase, a new breed of engineer-scientists are required to help reduce or reverse the effects of climate change on particular locations. They need to apply multi-disciplinary solutions ranging from filling the oceans with iron filings to erecting giant umbrellas that deflect the sun's rays.

Possible Emergence as a Profession: 2015

A Day in the Life

The three most frequent models for engaging a reversal specialist will be firstly as part of a planned long-term strategy on the part of a location to intervene before anticipated climatic disaster occurs. The second and possibly more common approach will be for specialists to be brought in when a climatic crisis is considered imminent or has started to occur. The third approach will be for our specialist to be brought in 'after the event' to try to help locations that have been devastated by climate change.

The strategies adopted will depend on the stage at which the reversal specialist is bought in. these will typically involve changes in carbon-based energy and transport infrastructure, and fine-tuning of existing alternative energy systems. In physical environment, interventions could include protecting and rebuilding destroyed or damaged ecosystems such as tropical rainforests and ocean beds. A critical aim will be to ensure that the local people benefit from the changes being made.

A typical intervention might start with detailed data gathering and assessment on the current situation. In parallel, in-depth discussions would be held with the local citizenry and civic leadership to understand their vision and aspirations for their location. the next stage might involve solution conferences with a range of experts and local citizens to identify and evaluate reversal options. These would typically be modelled and costed and an assessment would then be offered up and the preferred solutions would then be integrated into an implementation plan. Such plans will hinge on the funding and time available to see them through. where there is time available, a number of experiments may be run to see which option best meets the needs for a sustainable solution - e.g. for ecosystem protection.

10. Quarantine Enforcer

If a deadly virus starts spreading rapidly, few countries, and few people, will be prepared. Doctors and nurses could be in short supply to prevent or treat the problem. Hence, quarantines could be imposed to keep people in or out of particular locations. Moreover, as mortality rates rise and neighbourhoods are shut down, someone will have to guard the gates.

Possible Emergence as a Profession: 2030

A Day in the Life

The position may be seasonal or full time depending on the nature of the problem, possibly switching from the southern to northern hemisphere as the seasons change. Having to deal with possibly infected people trying to get through gate and deciding whether to use lethal force to protect everyone that is healthy is stressful. This suggests that enforcers will work in frequent short shifts, possibly with robotic help.

A key requirement for enforcers will be a strong immune system and the ability to stand up to intense psychological pressures - a common scenario will be family members pleading to be allowed through the gate to see their quarantined loved ones. Hence an enforcer's daily routine may include taking a range of vaccines and supplements, a rigorous physical exercise routine, psychological training and testing and personal coaching to help them 'let go' of any issues that could prevent them performing in a consistent and resilient manner.

A typical guard duty for an enforcer might include operating a checkpoint, reviewing the papers of those seeking to pass through, making instant decisions on right of access and rejecting people in a diplomatic manner. The ability to diffuse a tense situation will be critical as will clear judgement on when to use force and on what level of force is appropriate.

11. Weather modification police

The act of stealing clouds to create rain is already happening in some parts of the world, and is altering weather patterns thousands of miles away. Weather modification police will need to monitor and control who is allowed to undertake weather modification activities e.g. shooting rockets containing silver iodine into the air as a way to stimulate rainfall from passing clouds.

Possible Emergence as a Profession: 2020

A Day in the Life

The day never finishes - there is merely a night and day shift. Within a modification policing team, a range of specialist roles will exist ranging from climate scientists to surveillance and counter-terrorism specialists. A typical day might start with reviewing surveillance footage of suspect activity and analysing real time data collected from unmanned aerial vehicles and ground based sensors. The goal is to track possible unauthorised weather modification attempts. Where concerns exist, field teams would then investigate the case further and visit the suspected illegal modifiers.

The Weather Modification Police may also perform the role of vetting applicants and granting licences to those with legitimate reasons for wanting to intervene in natural weather patterns. Where modification licences have been granted, routing inspections might be performed to ensure that the owners are operating within legally acceptable bounds. As with drug enforcement, a key role of weather police will be to break up supply chains. Hence duties would include covert surveillance and interventions to track down contraband shipments of silver iodine and other weather modifying agents. Where criminal activity is detected, routing policing tasks of preparing and prosecuting a case would kick in.

Scientists play a key role in this policing function. A common activity would be analysing rain and soil samples to identify the presence of possible modification agents. Where suspect shipments are intercepted, the contents will need to be analysed to determine its possible intelligence and pass on new case examples of illegal weather modification technologies and approaches being adopted. A key part of intelligence gathering will be horizon scanning for possible new technologies, processes and bi/nano/chemical agents that could be used in weather modification activity.

12. Virtual Lawyer

As more and more of our daily life goes online, specialist will be required to resolve legal disputes that could involve citizens resident in different legal jurisdictions.

Emergence as a Profession: 2010

A Day in the Life

The internet is a major facilitator of innovation in both the legal and illegal realms. Hence a significant part of a virtual lawyer's time will be spent monitoring new legal developments and precedents that apply to the virtual world. Much of the legal territory remains the same e.g. disputes, contractual failures, ownership issues, intellectual property theft, sabotage, copyright infringements and trademarks. However, the complexity comes from the global nature of the web and the different legal jurisdictions that could be involved.

Some of the most interesting challenges will arise from dealing with international web-based criminal acts. For example, consider a British passenger on a flight from Paris to Singapore on an Australian airline. The passenger uses the on-board web-access to commit a hacking or phishing attack on victims in Luxembourg whilst flying over Bulgaria. Under whose legal jurisdiction should the crime be prosecuted.

Virtual lawyers will make extensive use of technology - for example setting up bots and spiders to develop a reverse audit trail of suspect transactions and scanning the web for possible clues or experts that could help in the prosecution of a case. A key role will be to advise customers on how to set up online activities - particularly e-commerce transactions - in a manner that is legally sound across a range of jurisdictions. The goal is to prevent possible future prosecutions in areas such as online gaming and content download.

13. Avatar Manager/Devotees - Virtual Teachers

Avatars could be used to support or even replace teachers in the elementary classroom, i.e., computer personas that serve as personal interactive guides. The Devotee is the human that makes sure that the Avatar and the student are properly matched and engaged.

Possible Emergence as a Profession: 2015

A Day in the Life

An Avatar Manager will typically have an educational background and extensive training in programming the online learning environments their students will be working with.

Daily tasks for a manager of these online learning experiences could include:

1. Welcoming a guided protocol to translate the interview data to determine the appropriate combination of virtual classes/modules.
2. Using a guided protocol to translate the interview data to determine the appropriate combination of virtual classes/modules
3. Prompting the learner to develop his or her own avatar as he or she becomes more familiar with the virtual teacher avatar
4. Monitoring students (virtually) who are in different learning stages and making behind -the-scenes adjustments to the software
5. Providing feedback to learners on their progress and obtaining feedback on their virtual learning experience
6. Using feedback to extract new rules and recommendations for the avatar teaching software and process - perhaps contributing to self-analysing/self-learning modules that make the intelligent agent in the software learn and reprogram itself
7. Meeting (virtually) with other managers to coach each other and develop a collaborative community among people in this role
8. Spending time each day being a virtual learner and test subject for future software iterations and breakthroughs in the field
9. As a manager of the human side of learning, monitor and foster mutually positive emotional experiences, offer mediation services between learners and teaching avatars, initiate termination of

ineffective relationships and manage the transition/goodbyes and introductions as learner advance to new avatars or leave the program.

14. Alternative Vehicle Developers

Designers and builders of the next generations of vehicle transport using alternative materials and fuels. Could the dream of truly eco-friendly transport and cars that travel underwater or fly become a reality within the next two decades?

Emergence as a Profession: 2010

A Day in the Life

While a lot of alternative vehicle development will take place within existing car manufacturers, even more is likely to happen in the start-ups that come from outside the industry. Some will be offshoots of battery and other fuel cell technology developer - others will be pure start-ups operating on a very low budget. Key for this new breed of vehicle developers will be innovation and a wide range of partnerships from financiers through to component suppliers and distribution channels.

A typical day for an alternative vehicle developer could include design and prototyping of vehicles and vehicle subsystems and wide horizon scanning for techniques and processes being developed elsewhere. Communication with others in the industry - possibly embedded in a corporate entity - is critical and places an emphasis on the personal skills needed to make open source innovation and partnerships work.

A significant part of a developer's time will be spent running tests to prove the performance, safety, reliability and environmental characteristics of the vehicle and its subsystems and submitting these for approval by the appropriate authorities. To bring such fledgling projects to market requires significant development funding, manufacturing partners and distribution channels. Hence a lot of the developer's time will also be spent presenting their ideas to these potential partners and selling themselves as the best option.

15. Narrowcasters

As the broadcasting media become increasingly personalized, roles will emerge for specialists working with content providers and advertisers to create content tailored to individual needs. While mass-market customisation may be automated, premium rate narrow casting could be performed by humans.

Emergence as a Profession: 2010

A Day in the Life

Narrowcasting programmers will be judged on how well they understand the needs of their audience(s) and how effectively they then tailor programming content to address those preferences. In the media world, feedback is rapid - customer either consume your media, stop part way through it or don't consume it at all. If they do consume it once, the acid test is whether they return. Hence narrowcasters will spend significant amounts of their time evaluating this usage information. Engaging in dialogue with customer and monitoring the social media on which customers discuss what content they are consuming.

The content offered will vary from channel to channel, but increasingly the narrowcaster's role will be to integrate original content with the sourced from a variety of third party media. The challenge is to present it in a manner that suits the end-consumer's personal preferences. Hence a lot of personalisation tools are offered to help customers further customise that which has already been tailored for them.

Making extensive use of artificial intelligence tools, web crawlers and customised alerts, narrowcasters will programme personalised content. This will then be grouped and presented according to different perspectives like emotional tone, originality and reliability, customer personality test will increase the relevance and specificity of search information given to data mining facilities. This will help ensure a stronger fit between the information given to data mining facilities. This will help ensure a stronger fit between the information collected and the user's interests. The narrowcaster will also provide a summary at the end of every day of the content delivered that day.

16. Waste Data Handler

Specialists providing a secure data disposal service for governments, corporations and those who do not want to be tracked, electronically or otherwise.

Emergence as a Profession: 2010

A Day in the Life

Applications run on the basis of 'Software as a Service' (SaaS). Clients will either log in to request a sweep of their data or have automatically programmed sweeps performed on a regular basis. Customers may ask for routine sweeps to remove cookies, audit trails of e-banking and records of electronic transactions. Others may have more complex requirements that could border on the illegal - for example removing all traces of suspect email conversation in the face of a criminal trial. Hence both illegal data handling services will emerge.

For those that can afford it, a more personalised service will be offered. For electronically stored data, the handler would log on to each of his client's devices and search for and purge pre-agreed categories of data to be removed and data labelled 'to be disposed of'. A more personalised service still would be for the handler to perform more regular sweeps, sampling the data held and providing advice on purging and the implications of retaining it.

The ultimate personal service will offer personal visits to a client's home to review all of their records whether on paper or electronic media and to perform both physical and virtual purges. The nature of the job will require handlers to be trained in the latest electronic data management techniques, software encryption, legal issues and customer service. Those offering a personal service may need police security checks and a form of personal accreditation. Data handlers will require high levels of insurance cover to protect claims arising from erroneous destruction of client data. The interesting legal issue here is that if the handler or handling software are good at their job, the client will have no proof that the data existed in the first place!

17. Virtual Clutter Organiser

Specialists will help us organise our electronic lives. Clutter management would include effective handling of email, ensuring orderly storage of data, management of electronic ID's and rationalizing the applications we use.

Possible Emergence as a Profession: 2015

A Day in the Life

A Virtual Clutter Organiser will typically be an expert in data management, security and networking and operate in three different ways - offering a downloadable solution to reside on your electronic devices, providing online Software as a Service (SaaS) solution and delivering a totally personalised service managing your data for you.

The personalised service would be offered to those who simply have no time or lack the technical proficiency to use such downloads or online services. The Organiser will either visit you or access your devices remotely. They scan everything, work through your emails, documents and online registrations and create a data management framework to hold your electronic information. They would install routines that guide the use to ensure data is store properly as it is created and encourage deletion of redundant data.

In the local model, the Organiser's software tools are downloaded into your computer from the web. The programs would also have the capacity to learn and would gradually build up a profile of the computer owner, develop additional categorisations as appropriate and identify where software upgrades are required to deal with new situations. Suggested refinements to the program are fed back to the manufacturer in real time, who modifies the software and updates the remote installations.

The online version would be run on request or on a scheduled basis - performing similar tasks to the downloadable version. In both cases the software would also offer data management framework to guide the user through every activity - e.g. automatically offering to set up folders to handle correspondence with any new contacts and providing a central repository to capture all electronic ID's as they are created.

18. Time Broker/Time Bank Trader

Alternative currencies will evolve their own markets - for example time banking already exists. Time Banks are community exchanges that enable individuals to earn time credits for performing services for the community and spend those credits on buying services for performing services for the community and spend those credits on buying services from other community members.

Emergence as a Profession: 2010

A Day in the Life

Most members of a time banking community will simply seek to earn time credit for performing services e.g. washing someone's car. They will then spend the credits earned on purchasing services from other time bank members - e.g. having someone paint your home. Others may seek to become Time Brokers and profit by running a time banking exchange and providing the matching service between providers and users of services. So for example, a buyer may pay ten time credits for someone to walk their dog, the dog walker in turn receives nine time credits, with the time bank broker taking one credit as profit. Their accumulated profits can then be used to purchase services within the community.

The time broker's day would be spent arranging transactions, suggesting a value to put on new services, vetting potential new members of the time exchange and resolving disputes between buyers and sellers. The community element of time banks will require a strong focus on encouraging dialogue between members and profiling case examples of the kinds of time exchanges taking place.

A time bank trader may operate within a time banking community, buying and selling time credits - possibly for hard currency. A notional exchange rate would be established so, for example, a time credit could be bought for one dollar and sold for 95 cents. Buyers might be willing to purchase time credits for hard currency if they think that the services can be purchased more cheaply that way. If the going rate to have your lawn mowed is ten dollars and the service is on offer for eight time credits, it would be worth your while buying credits from a time broker. The time broker will make their profits on the differences between the buying and selling price for time credits.

19. Social 'Networking' Worker

Social workers for those in some way traumatised or marginalised by social networking.

Possible Emergence as a Profession: 2015

A Day in the Life

These social workers for the digital world will combine social work and counselling skills with a deep understanding of the dynamics of social networks and the best practice strategies for surviving in a connected world. A typical day might start with an hour attending to their own social networks. There then follows a visit to a corporate client for one to one sessions with staff who feel they are being bullied within the internal social networks or not performing effectively in the external communities of which they are part. A session might follow with the client chief executive to help them determine why the company is portrayed so negatively across the social networks despite an active commitment by the firm to engage and share in the virtual world.

On returning to the office, a series of face to face and virtual consultations follow with clients experiencing a range of social networking problems. A common issue is stress created by trying to keep up with discussions and communications received across a range of networking platforms, issues of virtual bullying are common as are clients who feel pressurised to participate in the virtual world, even though they don't want to share their personal thoughts and actions.

Our social worker has adopted key strategies for dealing with the challenges of the 2/7 society. Although the phone doesn't ring for incoming messages whilst a consultation is underway, images are projected of incoming callers on the rear wall of the office behind the consultations, the social worker handles urgent calls. A couple of hours are then devoted to research. A couple of times a week they attend physical evening networking events as these still prove to be a vital source of generating new business.

20. Personal Branders

An extension of the role played by stylist, publicists and executive coaches - advising on how to create a personal 'brand' using social and other media. What personality are you projecting via your Blog, Twitter, etc? What personal values do you want to build into your image - and is your virtual image consistent with your physical world persona and your goals?

Emergence as a Profession: 2010

A Day in the Life

A day typically starts with a review of the press and social media to see how clients have been portrayed in the previous 24 hours. Extensive use is made of alerts, web crawlers and bots that are constantly scanning every form of media for any mention of our clients and their 'competition'. A screen on the office wall flags up alerts as each new report comes in. A staff member - usually an intern - is dedicated to scanning these alerts in case any immediate action is required. Each client has a dedicated web space where every mention, image or video of them is logged for their review. All client communications with the outside world can be captured instantly, including instant recording of all verbal conversations.

There then follows a series of video and face to face consultations with potential clients. The aim is to understand their personal branding goals - often this involves a level of life coaching to help them determine what they want to achieve before working out how to brand them. For premium clients, a service is offered to actually be their online presence - managing contributions to other networks, posting updates and responses to their own multi-media blogs. Regular meetings are held with media to 'sell' the latest story on our clients and try and create interesting angles through which to profile them.

Client meetings take place to present ideas, discuss the success of branding activity to date, plan future actions and determine how to respond to both positive and negative brand coverage. For many clients with 'legacy' the issue is how to best to redress past misdemeanours and negative coverage. common issues include how to remove embarrassing and damaging past postings to websites, blogs and other forums and how to prevent stories from the past rearing up again. Advice could include the right places to be seen, people to be with and how to get invited to the right events. Evenings are often taken up with visits to social events to see how our clients are performing and help avoid any up with visits to social events to see how our clients are performing to help avoid any personal indiscretions.