

Guiding vision
“Living in the networked world:
custom-made and safe”

Scenario “Tina and her Butler”

“To live is to stay in touch”, this could be the slogan of Tina S. She is quickly approaching the age of 70, but indeed still is — as many of the elderly in the year 2020 — enjoying a very active lifestyle: travels, honorary appointments, fitness, friends, relations, and the “part time office” with her son — no, you certainly could not say Tina is threatened with boredom.

**Video-
conversations
only on demand
and ...**

Right now “James”, the virtual butler, comes forward and announces an incoming call: granddaughter Victoria is getting in touch again. It is remarkable, though, that James is signalling a video-call: usually it is rather Tina who makes a point of getting a visual display even in short conversations with her grandchildren, the way otherwise only the family doctor does for virtual home visits.

Tina adjusts her posture in her chair. James interprets her movement correctly—a red blinking light indicates that James has turned on the tiny camera.

“Hello, Vicki, haunted by geometry assignments again?” Tina could hardly think of any other reason for a call with the optical channel.

“That was two years ago, grandma, in tenth grade, I now need you for something special,” a rather dishevelled Victoria shows up on the small screen. “I need you, well, as contemporary witness. For a homework essay, with the topic ‘When my grandparents were young’.” Above all, Victoria would like to know how her ancestors managed to get by without the Evernet. And since the essay should be delivered with multimedia support, she needs original sound and pictures. “You don’t mind, do you, grandma?”

**...if required
with electronic
“scenery”**

No, that is not the issue. But Tina has to tidy herself up a bit, even if it is just for school homework: check the hair; optimise electronically the colour of the blouse; should she also have some jewellery composed into the picture? After all, she has not anticipated she would have to grant a TV interview today, so to say.

**Insufficiencies of
communication
technology are
overcome...**

With her 17 years of age, Victoria still has a rather confused idea of the past. Of course cars and TV had long existed in Tina’s youth, and appointments had also already been made by phone, only that you did not carry one around with you. “You ask about the biggest difference? Many things were simpler and for this very same reason more complicated: You have to imagine that way back then we had mostly to deal with lifeless devices, which would not talk to you, would not memorise anything, not even phone numbers. Later, roughly around the turn of the century, there was an upsurge of countless small appliances, of more or less practical value; but these did not have any exchanges among them yet. If you had entered a phone number in your cell phone, your laptop would still not know it by a long shot. You had to take care of everything yourself. — At that time,

technology was often developed without enquiring accurately enough what the added value for the user could be or without having an eye on the social networks the technology was supposed to support. Imagine: even after the year 2000 we still had so-called multi-band phones and had to make elaborate decisions which network we wanted to communicate in ... One also had to decide for oneself whether and how to encode an email—or else to forget about it. It also was not straightforward to do, over a period one even had to send the so-called ‘public keys’ by oneself, — and at that time there was only just a single level of privacy. Today we have four levels of security—but you don’t even notice, because your butler takes care of everything.”

No wonder Tina thinks highly of “her James”: the personalised virtual butler takes on communication and coordination tasks, manages the calendar of appointments, “looks” after household technology and offers advice with many problems of daily life—from insurance to fitness; checks price tags; negotiates offers; and many things more. Furthermore, he is unconditionally “close-lipped”, which is important insofar as he knows many of Tina’s small quirks, for example, that she does not want to watch any movies on TV where spiders pop up. After all, she has been breaking in James for over five years now, and by now he already knows quite precisely when she wants to be approachable for whom, and at what time of the day it is the turn for what activities. Sometimes Tina even gets the impression that James already recognises her condition by the pitch of her voice and manages to guess whether she is up for a chat with one of her friends or not. —She simply has to ask maintenance service sometime, whether this is indeed possible, or whether she is just imagining it.

“Back then,” Tina continues, “devices did not know their users, and even if they had a speech module at all it would only babble some pre-recorded phrases— understanding and recognition being totally out of the question. At that time I had list of all kinds of passwords stuck to my screen—for the corporate workspace; for online-shopping; online-banking; etc. —they were all different, impossible to keep them all in mind.

“But do you know, Victoria, perhaps the biggest difference is that for the elderly the scope of life kept shrinking; at first, they were not allowed to work any more; then, the body would not want to; sooner or later one was imprisoned within the house or in a single room and but for two, three close parents or old acquaintances no-one would take care of you. Now there is an old gentleman in our condominium who is completely confined to his bed, care level 3.5, if that should mean anything to you, but he is still active in multiple associations and is even taking care of the net forum of his golf club. His body is giving up, but in some way he can still be a participant everywhere. That keeps him mentally in shape. — But now let’s hear what your friend,” — for a second she struggles for the name, then James prompts her, “what your friend Paul is doing”.

But even as Victoria is still expanding about her current fad, James signals an incoming VoiceMail with an as decent as old-fashioned gong chime. In contrast to many young people Tina does not like to lead two conversations at once, but

**...by the
personalised
virtual butler**

**Users are
recognised and
understood**

**Social participa-
tion thanks to
networked
worlds of
interaction**

Victoria anyway states that she now will have to first process the information received: “I’ll be back in touch, grandma.”

Tina’s friend Gertrude announces she will be late for the agreed fitness training. She sounds somewhat irritated: the rain has upset her plans. In fact, her virtual butler had made re-arrangements in good time and looked up for her a connection by bus instead of the usual underground. But she held off too long with the accelerated departure and thus in spite of all caring mentoring she ended up catching only the back view of the bus. In her agitation, Gertrude does not disclose how long she now will have to shiver at the bus stop, but James already made his enquiries: she will arrive in a little over half an hour.

The virtual butler as mobility agent

**Virtual travel planning with “farsightedness” and ...
... agent support**

The “TV interview” has livened up Tina more than she would like to admit to herself. She runs to the window, as if Gertrude could already be coming, tinkers with the idea of going through the planning for summer vacation with James for yet another time. But she has already inspected her hotel room and the surrounding hiking goals twice. And whether any of the hotel guests would make for a dancing partner or a round of card games is better left for James to find out in advance.

“In the meantime, You could water the flowers for Dorothy, madam” James reminds her. “You promised to take care of the flowers until she gets back from her educational leave.”

Mobile communications “almost as at home”

Of course. This she had yet again—repressed. Tina is candid with herself. She had promised Dorry to do it, but she just does not fancy entering the alien flat. She pulls herself together, walks out into the small atrium of the semi-detached house. The lock clicks shut behind her; James is now “located” in her bracelet, which in addition to the communication interface also houses the VitalsMonitor.

Security as required

Then Tina is standing in front of the neighbour’s door. Why does not anybody open? “What’s up, James?” With a thin “bracelet-voice” James explains that Dorothy’s apartment door is set to security level three and requires identification by voice in addition to the shake-hands of the virtual butler. “You will not quarrel with a door,” Tina orders herself and utters her name.

Personalisation...

...according to taste

Inside, Dorry’s butler welcomes her with an altogether embarrassing confidentiality: “Hello Tina. How are you?”— She is here to take care of something, and not to small-talk with the software! But she knows, it is always awkward to deal with an alien butler. Already the fact that the “Djinn”, as Dorry calls her Butler, is looking at her as an oriental bottle ghost from not one, but two screens does not match her sense of humour. James is reserved. Four years ago she invested the effort of having a tailored pictorial embodiment for James made up for her, it is true, but she hardly ever uses it. The voice, with a slightly posh twanging, emulating a famous actor from the century past, almost always does the trick for her.

Everything automatic?

Dorry affords the luxury of having the flowers of her small winter garden not be watered by the domotics. What Tina delegated for herself to James (and the home technology controlled by him) with the aid of a few small pipes, Dorry prefers to

keep in her own hands—“or else one could set up some leased or artificial plants as well!”

Some of the plants make an unwholesome impression—did they already look like this at the time of Dorry’s departure? It would be Tina’s preference to check back with Dorry, but Dorry is unreachable over her holidays—at least once a year “offNet”, this is a bare minimum of luxury requirement. And this puppy of her Djinn declares himself not to be competent for this case, though otherwise he is paying so much heed to Dorry’s preferences!

In all the hurry a flower pot overflows, an earthy broth drips onto the floor. Immediately the automatic vacuum cleaner comes snorkelling along, and steers around her shoes. “Djinn, why don’t you do this once I’m away?” But the Djinn insists, “Dorry always wants wet dirt to be done away with before it starts to dry.” In any case, Tina is jolly glad when the door closes behind her again.

Her mood brightens up instantly, as she sees Gertrude coming. Under Gertrude’s umbrella they stroll to the community complex of the housing estate, where the exercise rooms are located.

Gertrude, even though quite a few years Tina’s elder, carries out the profession of a “personal secretary”. She attends to several clients, mostly in financial matters. It is one of her most important tasks to maintain control for her clients over the multifarious electronic and unfortunately often too little considered payments in transportation, entertainment, or use of media, and thereby to prevent personal expenditure to get out of hand. Of course a virtual butler would also be able to do this, but, as Gertrude phrases it, “some people just want social control.” In doing so, she leaves it open which client is placing too little trust in the payment system and who would rather want their own consumerism be controlled in a trustful manner.

Gertrude, as also Tina, is an ardent fan of VR-fitness. “Build the mind along with the body!” that already used to be the motto as this initially rather expensive technology was first introduced in commercial fitness studios. It is only a few years back that the operators of Tina’s housing estate had their own fitness complex retrofitted with such a VR-Cave.

This time the two have chosen a walking unit through the Valley of the Kings. The run through actual sand, the treadmill underneath being almost imperceptible, the heat approximates the original weather conditions and the optical illusion is also sufficiently convincing. Of course they know that they cannot climb down into the tombs. And as they stamp along, a virtual guide refreshes their knowledge about the Old Empire. — until James comes forward: the optimal training level has been reached. For next week, they book a virtual cross-country skiing track around an Inuit settlement in Greenland.

A quick quarter of an hour later, Tina and Gertrude are cosily sitting together over a cup of coffee. Of course the coffee machine brew Gertrude’s cup exactly to her liking: decaffeinated and with ample Crema. But whether it was James who still remembered Gertrude’s taste or whether it was Gertrude’s butler who took the

**„offNet“ —
Unavailability
as luxury**

**Trust is
of the essence**

**Fitness training
for body
and mind**

Expanded participation in political life

initiative is of no concern to them. The only thing that matters is that the coffee tastes good and that they have the opportunity for an exchange over the next activities for the “party for social rejuvenation and generational balance”. Tina and Gertrude share the view that the upcoming generation is being pushed to the fringes by being simply outnumbered by the seniors—and this cannot be good, neither for the old nor the young. Both first became members via the “electronic regional association”, but by now have also already participated on site to a few events.

Work with maximum flexibility

They also agree that excluding the seniors from the labour market would not be of any help to anyone. Jointly with her son Karl, Tina herself operates a professional allocation service for volunteers and agency for honorary offices. Since Karl travels frequently in his second job as musician, they virtualised her office through and through. In this way, Tina and he can deal with almost everything at home or even from underway. This not only saves them the rent, but they can also stand in for each other in a most flexible manner.

Remote servicing in the “privacy sphere”

Towards evening, Gertrude says good-bye. Tina cleans up. She is a little anxious: remote servicing of James is due tonight. There has never been any serious accident in this matter, and furthermore there is always a backup. And still... Upon waking up, James will not be exactly the same any more. Perhaps react a tad differently from before in conversation. And even if there should be no perceivable changes: she will still be on the lookout herself, for an unusual stammer, a slip of the tongue... The first days after the inspection she always feels a bit eerie, most probably without any reason. And still... An inspection just is an uncomfortable thing, akin to a health check-up. You never know what the result will be.

Liability for agents

In any case, James cannot get around having the check-up, since it is only by keeping up with the regular six-monthly inspections by certified personnel that the insurance protection against misconduct of the virtual butler will remain valid, e.g. taking on liability in case James should cause unwanted costs in his researches or negotiations or cause any other (intangible) damage. Furthermore, it is in Tina’s best own interest to know whether James is still “clean”, or for instance making superfluous suggestions due to infiltrated illegal client-binding software.

Trust is not a matter of luck

Of course Tina has exercised highest care in the selection of the servicing company: several offers, personal talks with personnel. Whoever thought to be able to fob her off with an electronic salesperson, a sales avatar, was already out. In principle she also does trust this Dr.-Ing. Mehlmann, who is going through James with a fine-tooth comb each time—she would not accept a service with changing or anonymous carers. The fact that this Dr.-Ing. once even advised against the update of a component speaks in his favour.

Levels of realism

In the evening, Victoria calls up once more, this time only acoustically. With pride she reports about her good grades in a training program for employment applications, which is part of the school leaving exams. Unlike at Tina’s times, the first round of applications (and accordingly also the training) always takes place in Cyberspace and is strictly carried out with gender-neutral avatars on both sides.

“I would have gotten the job,” Victoria is all enthused, after which she finally comes to the point. “Hey grandma, if you have the time, I would perhaps stop by at your place sometime tomorrow. You have to show me the old family pictures once more, perhaps I can use something for my homework— ‘Grandma with a change-of-the-century shlepptop’ or some such. Why don’t you finally have all the photos scanned in, anyway?”

Guess why. Tina has to smile. Would Victoria drop by, if all the photos were available on the Net?