



planet



communities



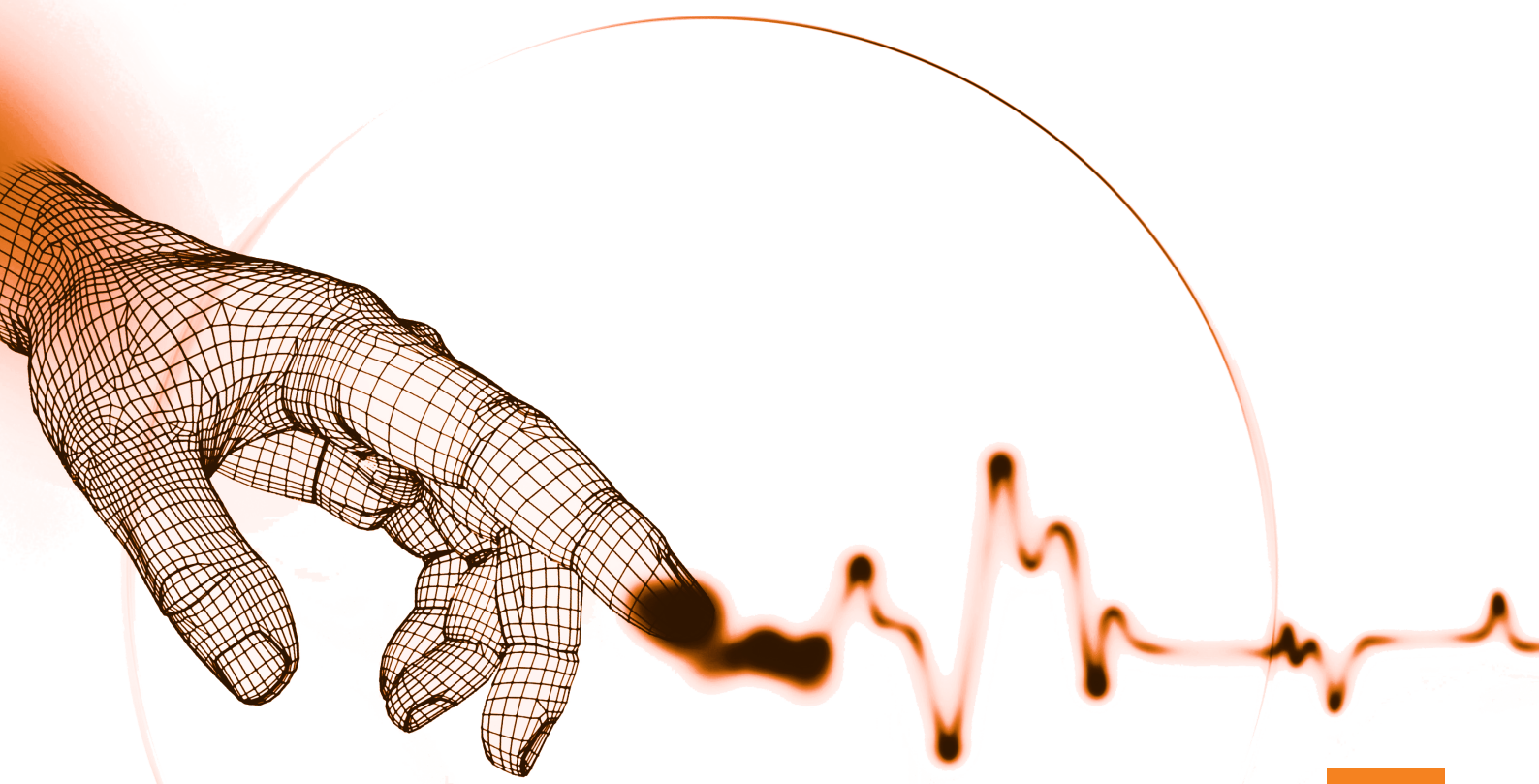
bodies



thoughts

sensor networks

as the New Growth Opportunity



our planet

our communities

our bodies

our thoughts

increasingly connected, we find new possibilities
for making changes that help us all

“ Real change
comes from
users, not
innovators. ”

Orange Institute has been convening multidisciplinary colloquia on the massive impacts of networks on our society since 2009. Previous conversations have occurred at university and innovation park settings in Silicon Valley, Tokyo, Beijing, and as you see here, Madrid. These are intimate, open, and deep discussions that integrate social, technical, and humanistic trends into disruptive perspectives on our possible futures.

As this quote from Professor Maria Arredondo shows, the challenge of a **sensor-enriched world** is more about deployment than technical elegance. The **payoff is in changing behaviors** and understanding the impact we have on the world.

For two days in Madrid, Orange Institute faculty and participants explored the growing number of connections between people, technology, and the built and physical world. What we found is that regardless of the domain—be it the environment, the world of media and entertainment, or our own bodies—we are moving from a passive, reactive mode to a proactive, dynamic systems model where data drives our decision making. The enablers of this dynamic response are sensors arrayed in networks of all kinds.

This text exposes just a few of the ways in which sensors and networks are impacting every aspect of our lives and livelihoods.



Orange Institute President Georges Nahon inaugurates Day 1 at the Torre Cristal

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program for **sensor networks**
as the New Growth Opportunity

22nd-23rd March 2011, Madrid

day 1: morning

the challenge of well-being
in a connected world

Inaugural address

Georges Nahon
President of the Orange Institute

**“Translational Research in Modern Health Systems”
(Hospital Networks in the US)**

Michael Kahn
Director, Colorado Clinical and Translational Sciences Institute Core Director,
CCTSI Biomedical Informatics University of Colorado Denver

**“Brain Networking for Cognition: a Source of Inspiration
for Connectivity”**

Francisco del Pozo
Director of the Center for Biomedical Technology, Montegancedo Excellence
Campus, Technical University of Madrid

**“Wellness and Chronic Disease Remote Management:
The new health dimension”**

Maria Teresa Arredondo
Director of the LifeStech Lab at the Montegancedo Excellence Campus,
Polytechnic University of Madrid

day 1: afternoon

energy is the new frontier
of network science

**“Toward Network Systems Engineering for Meeting
Energy and Environmental Dream”**

Marija Ilic (videoconference)
Director of the Smart Grid Research Center at Carnegie Mellon University

**“Challenges for a new Electricity Sector in the XXI
Century”**

Pedro Gonzalez
Ministry of Industry, Advisor to the Secretary of Energy

**“Energy: a Mechanism of Networking and a Real Frontier
of Network Science. The European Union as a Unique
Example”**

Francisco Larios
Deputy General Director European Programs, Ministry of Science and
Innovation

day 2: morning

social connectivity is
rewiring the media world

“Water and Waves: The new Media world”

Mikel Lejarza
President of Antena 3 Films

“The Ethics of Networks”

Gervais Pellissier
Deputy CEO France Telecom Orange

“Changing paradigms in Media Companies”

Santiago Miralles
Director of the Interactive Media Business in TV3

**“Anticipating Media New Paradigms and Business
Models. The Network Factor”**

Jose Luiz Sainz
General Director of National Media in Vocento

day 2: afternoon

real people
are the new networks

**“Montegancedo Campus. Leading Edge R&D model
for Spain in the XXI Century”**

Gonzalo Leon
Vice President for Research, Universidad Politécnica de Madrid

“Real Madrid: A Networked Community”

Jose Angel Sanchez
Executive General Director of Real Madrid

“The new networked education”

LLorenç Valverde
Vice President Universitat Oberta de Catalunya

**“Network Science: From the Cell to Mobile
Communications” (Closing Keynote)**

Laszlo Barabasi (videoconference)
University Professor at Northeastern University

event in action





Why? Because sensor-based instrumentation of end-user demand is both a bonanza for network scientists, and an economic imperative for a world facing climate change. Spain's position on the European continent makes it a perfect laboratory for building out this sensor-based data cloud over its power grid.



Energy is the New Frontier
of Network Science



DYMONDS: IT for New Energy Grid Architectures

Dr. Marija Ilic, ECE and EPP Professor, CMU

The creation of “smart grids” is the application of information technology to the power system, coupling this with an understanding of the business and regulatory environment. Critical to the creation of “smart grids” is:

- *development of models of the power system*
- *development of command and control software*
- *incorporation of security, communications, and safety systems*
- *before hardware is deployed!*

This IT approach has been defined by a team of researchers in the US and Europe working on a model called Dynamic Monitoring and Decision Systems (DYMONDS). This approach is based on the innovation of using control engineering, and systems theory, as a unifying theme for modeling infrastructure systems as complex dynamic *systems* encompassing technical, economic, policy and information processes.

Current Situation: Missed Opportunities Caused by Inadequate Management of Temporal Uncertainty

In Europe and North America today, Financial Transmission Rights (FTRs) are currently based on deterministic calculations. Temporal inter-dependencies are often neglected in today’s tools; consequently, planning/investments are not closely related to the short-term decisions. This lack of flexibility has a huge effect on technical performance and financial outcomes. Sustainable (electric) energy systems (SES) cannot be based on simple blueprints.

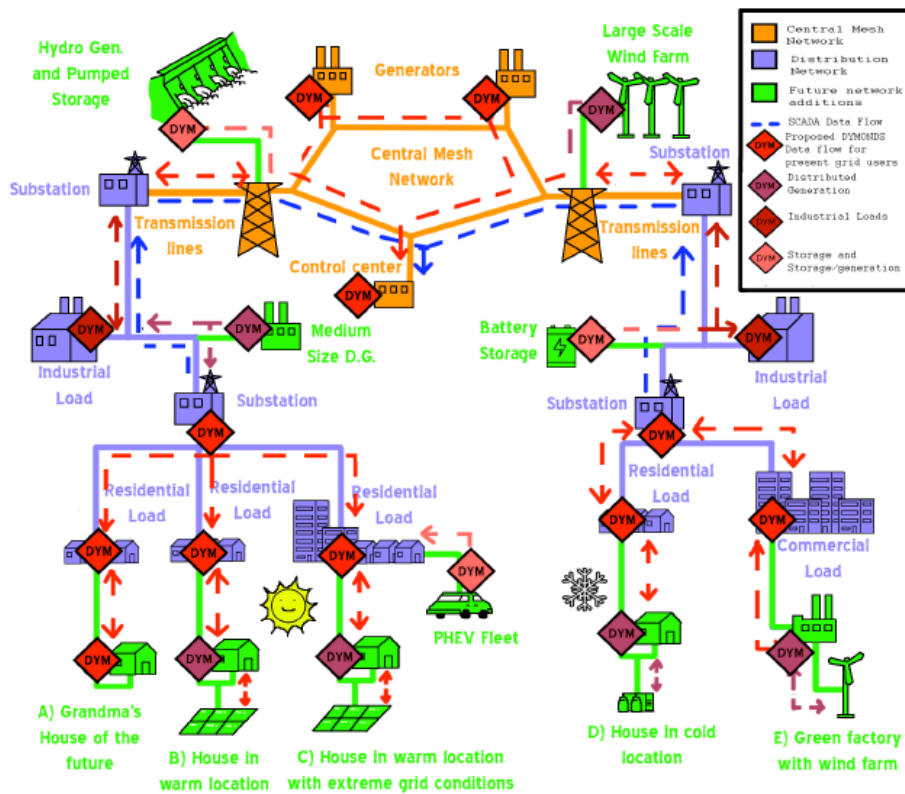
As a result of these factors, there is a need for new infrastructure to support change. This will not be easy, as it requires the industry to move from worst-case, deterministic, hierarchical control design to multi-layered protocols in support of multiple-tradeoff decision-making.

The Need: adaptive software for enabling different objectives as conditions change

What is required is a transformation of today’s electric power grid to an active enabler. Instead of building large passive power lines, we need to redesign the grid intelligence to enable selectively building where truly necessary. This will in turn require methods for managing dynamic response under uncertainties: just-in-time (JIT), and just-in-place (JIP) production, delivery and consumption of power.

Neither ICT nor control engineering by themselves are sufficient to embark on this tremendous challenge. One needs a very careful combination of data mining techniques and the more structured control techniques to solve the problem.

Instead of building large passive power lines, we need to redesign the grid intelligence to enable selectively building where truly necessary.



DYMONDS-enabled Physical Grid

Solution: Flexible Open Access

Integration: Change of Paradigm

Once the models/software exists for making the distributed decision-makers smart, one employs communications to provide the relevant information online. System users observe the status of the system, and internalize into their distributed objectives: this is how coordination takes place. To enable this kind of decision-making, predictive signals for forecasting both in regulated and restructured systems play a key role.

These signals are modeled and the models are data-driven. In order to build these models and update them in a dynamic fashion, we need:

- capture of spatial and temporal interactions for improved reliability and efficiency
- new platforms for converting data into information
- careful modeling of interaction variables to manage huge systems online without excessive complexity

The stakes are high and the benefits could be dramatic—a gain of 20% efficiency through the application of ICT could be considered low-hanging fruit.

The solution can yield:

- distributed decision making for anticipated system conditions (provided by means of minimal coordination to the users).
- predictions, adaptations, aggregation through cooperation and/or minimal aggregation
- large economic and environmental benefits

The solution is dynamic. This means the use of ever-changing data to verify the models in use, as system status changes. In addition, user-friendly tools are needed for detecting the key technical problems and most effective actions

Summary

Combining a systematic, model-based approach to risk management with ICT intelligence and distributed hardware is a real opportunity to provide a framework for flexible dynamic robustness in complex systems.



The physical movement of humans is now computable, allowing the analytics of Data Science to be brought into engineering the built world. Within the traditional world of marketing, online community is both reinventing the way we talk to existing customers, and creating new customers through digital relationships. These people networks are massive and boundless. We will explore the science, the marketing execution, and the new digital domain with a faculty from academia, industry, and Internet.



Real People
are the New Networks



iAm the center of the digital universe: old truths for a new awakening

Santiago Argelich, Senior Partner at Oliver Wyman's

In simplified terms, the principal difference between the digital and the physical world can be reduced to speed. Whereas technology travels fast, the reach of the human mind has not evolved proportionally. Our needs have remained much the same: we still rely upon an ability to discover relevant information in time, we have an innate need to express ourselves, to belong to a group, to trade, share and exchange.

In the physical world, information travels slowly and is typically shared with defined visible audiences. Social interactions take place under a set of long-established rules, norms and codes, which

most participants adhere to. In the digital space, information is ubiquitous and instantly accessible to a wide, anonymous audience. Furthermore, our limited trajectory online has not yet allowed us to establish corresponding social

rules. Lost for landmarks in an unknown landscape, we have simply taken our old wisdom from the physical world and expect the same rules to apply online.

When the Internet first took off, we happily accepted exposure to ads and banners in exchange for free access. New Internet companies were perceived as good guys, the challenging innovators that cared deeply about the freedom and promise of the Internet and its users. Google's "do no evil" code of conduct typifies this attitude.

Web 2.0 opened up a new wonderland. Digital content moved beyond established media, university groups

and scientific journals, and the Internet became much more than a toy for geeks and the very wealthy. Everyone started to broadcast, to have opinions, to like and to laugh out loud, tweeting at the top of their voices. *It's all about me*, but it is increasingly about *who* I am, my performance in all the different roles of my life—my family role, my work identity, my hobbies. And as the Internet is increasingly populated with personal data, photos and videos, it is growing in complexity.

Although the public images of companies such as Google, Facebook, Apple, TomTom and Sony have taken a dent recently due to issues around user privacy, the general attitude of most Internet users is still naive. We do not perceive that we are selling our souls, and if there is a Big Brother he is benevolent and means no harm—surely he will always provide us with great platforms and services free of charge?

Warning voices tell us that the World Wide Web has become a "World Wild West" in which freedom is being exploited at the cost of privacy. The rapid growth of personal information available coupled with a lack of corresponding privacy norms, has created a social and legal vacuum. This new El Dorado is attracting an increasing number of modern gold diggers—armed with data tracking software, cookies and web bugs and seeking to monetize our Web use with advanced analytics of user behavior.

Some argue that times are changing, that we are now more open about sharing our information. However, quotes such as "privacy is dead" reflect a simplified understanding of human nature; people still care deeply about their integrity and intimacy online, just as they do in the physical world. The past year has seen increased media attention and scrutiny regarding the potential negative conse-

The issues and problems around personal data are likely to grow exponentially with the emergence of connectivity tools and sensor networks that are able to passively monitor, capture and transmit more sensitive types of data—sometimes with our knowledge, sometimes without.

quences of renouncing privacy online. We are slowly realizing that we could be put in a vulnerable position, if sensible personal information is used in an unethical way, or if it ends up in the wrong hands. The problem is accentuated for already weak and unprotected groups, such as children. Recent examples that have added to the controversy include the discovery that iPhones and Android phones collect and store location data in a way that could allow Apple and Google to track users' movements, and the hacker scandal at Sony in which personal information from more than 100 million online-gaming accounts was stolen. For companies, the potential threat of massive withdrawal is not to be underestimated. Just like our ancestors, we are programmed to either *fight or flight* when faced with a threat.

Looking forward, the issues and problems around personal data are likely to grow exponentially with the emergence of connectivity tools and sensor networks that are able to passively monitor, capture and transmit more sensitive types of data—sometimes with our knowledge, sometimes without.

These include health indicators, location tracking, reading habits, financial transactions or even energy consumption. Some of this information will inarguably be very valuable for the individual and the society as a whole, provided that it is shared in the right context and with the right agents. For example, I might want my doctor to access my metabolic data in real time, but I might not want to give my insurance company a heads up on my potential future state of health.

Moreover, it is not just about access to *data*. With the homogenization of personas, the *data* from our various social platforms merges to become *information* about us. Add in smartphones, location tracking and credit card details...and there is *knowledge* about me—the individual—in someone else's hands.

If we believe that participation in “my connected society” is to be mainly voluntary, terms such as *signal strength* and *routing* have to be applied not only to the technical specifications of the network, but also to its social and human components. Technology should empower and strengthen us in all the different layers of

our seemingly complex, or very simple, lives—both real and digital. If I am the center of the digital universe, I need to regain a reasonable level of control.

The successful mass adoption of a *multitude of sensor networks* will strongly depend on whether “my connected society” is perceived as a safe haven by its participants. To accomplish this, legislators, companies and society at large need to address a number of critical topics, including:

Legal aspects: handing control of personal data back to individuals

Privacy is a fundamental human right, as well as a symbol of trust and intimacy.

- User data is personal and belongs to the individual. It is not wrong to make money from users and their data—that's business, after all. However, what is being traded, and the corresponding rights and obligations of the trade, need to be clear and transparent to all parties engaged.
- If privacy is understood to be a human right, the individual should not be burdened with protecting his/her privacy. Users need to be presented with solutions to manage their data when it is held by organizations that leverage that data; *opt-in* should be the default—not *opt-out*—and people should be able to delete and move information as they see fit.

Legal and moral aspects: establish rules, standards and norms for coding:

Legislation has a role to play in any new market, including the Internet and connected networks.

- The Internet would benefit from more openness and scrutiny of its core: the coding and algorithms. The simplified debate about openness and its role in innovation needs to be expanded into a more diverse debate on the role that legislation can—and needs to—play in regulating the industry. Who decides the standards and norms for how code is written? Who should write the law, and what criteria should govern the new gatekeepers and distributors of information (for some more food for thought, see Eli Pariser's work on online filter bubbles)?

Educational aspects: educating users and creating awareness:

Technology travels faster than the reach of the human mind.

- Each technological disruption requires a longer period of adjustment and education, as users slowly find their ways around using the new services and companies ramp up the learning curve. The responsibility of education falls on politicians, companies and users themselves, and could potentially range from awareness campaigns, “online data mirrors” (i.e., an application that would help users understand how data is collected and transmitted) to a gradually changing mindset toward paid services versus free services.

Technological aspects: design networks to mirror information flows and social interaction in the real world:

Even for networks, social competence is vital.

- According to Chris Peterson, most privacy problems on Facebook occur because the architecture (coding) of the Internet disrespects norms of distribution and social interaction. The contextual integrity we have grown accustomed to in the physical world and take for granted is not catered to on the Internet. The obvious solution, according to Peterson, is “to design the network such that information flows consistent with user expectations and norms” (for more reading, see Peterson's “Losing Face”).
- In this context, networks should include elements to allow for multiple “unconnected” iAm identities and for access granularity, in order to replicate the complex structure of social interaction.

Technology has undoubtedly changed our daily lives significantly, and “my connected society” holds many promises for the future. However, the evolution of “my connected society” would greatly benefit from a taking a step backward to contemplate some old truths. To this end, we call on companies, users, politicians and legislators to work together to fight off any threat that could potentially put mass adoption at risk.

Faculty of Orange Institute Madrid



Participants of Orange Institute Madrid

Orange Staff of Orange Institute Madrid



Participants of Orange Institute Madrid



There are several challenges for the sustainability of our world. The population of the developed world is aging even as its access to global and personal information is growing. Social expectations for well-being demand a change in the healthcare business model that we have today. Networks and Information Technology play a fundamental role in the evolution of this new model.



The Challenge of Well-Being In a Connected World



Distributed Research Networks for Translational Research and Continuous Health

Michael G. Kahn MD, PhD University of Colorado Denver

Distributed Research Networks: 2020

Epigenetics is the study of the relationship between genomics and the environment. In most complex human diseases, the interaction between environmental risk factors and genetics determine the onset and severity of illness. Lifestyle interventions are known to have powerful influences on disease incidence and morbidity—in some cases, even larger effects on disease progression than pharmacologic interventions. Risk modification strategies, such as weight reduction, exercise, and smoking cessation are powerful modifiers of most chronic disease outcomes. In addition, a wide range of environmental exposures over time can modulate disease severity.

In 2020, under the vision of ubiquitous “Sensors Networks”, a futuristic state could include a wide range of continuous environmental sensors which capture real-time measurements of light, sound, temperature, moisture pollution, air quality, toxins, radiation, microbial and viral contamination and a host of other environmental factors. Like the current Global Position System (GPS), these sensors could continuously broadcast their measurements for any receiver to accept. In 2020, the data and communications network is ubiquitous and data capture, sharing, and computation are completely liquid. Communications and computational liquidity refers to the ability of autonomous computing agents to have full access to the infrastructure required to transmit and compute with data sets independent of origin or owner as long as appropriate security and access protocols have been followed.

In the envisioned 2020 communications and computational environment, patients can collect data about exposures by capturing sensor information. In this view, data are pushed to a person who decides to accept or reject sensor data rather than having personal data pushed into the sensor network. However, a private network and storage area allows lifelong clinical and exposure data to be integrated and made available to computational models of disease risk that generates continuously updated personalized risk models. An early description of autonomous computational processes that continuously integrate and calculate disease risk and modification strategies was described in an unpublished MIT technical report Called Guardian Angel,

1. Engages in data collection.
2. Monitors medical conditions, effects of therapy, side effects.
3. Interprets facts and plans.
4. Allows patients to customize plans within limits.
5. Performs “sanity checks” on conclusions and plans.
6. Understand patient preferences.
7. Shares information based on patient permissions.
8. Provides specific education and explanations.
9. Implements reminding and alerting.
10. Provides support via contacts with other patients, insurance, and research.

Meet your Guardian Angel



Dr. Michael Kahn presents the Guardian Angel wellness concept

the proposed architecture focused on patient-centered computing that had 10 core features. The MIT technical report provides a compelling envisioning clinical vignette about how

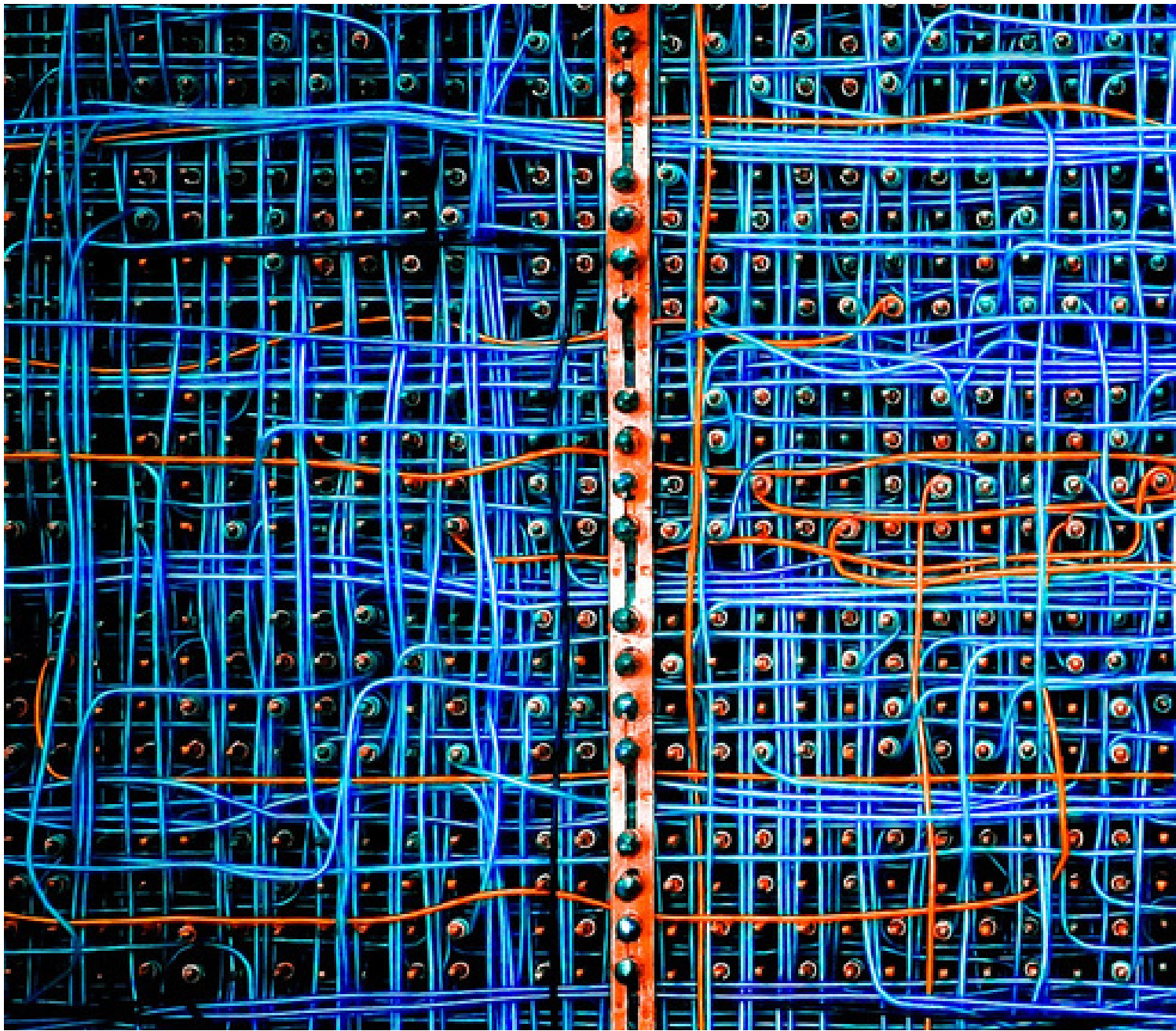
a Guardian Angel infrastructure could provide collaborative decision support for a 14 year-old diabetic patient struggling to balance glycemic control with a busy and active teenager's life. In the vignette, multiple Guardian Angel components work collaboratively with the young patient and her parents to find a set of treatment options that balances her need for well-controlled blood glucose levels and a complex, changing set of teenager activities and needs.

The Role of the Orange Institute 2011 Participants

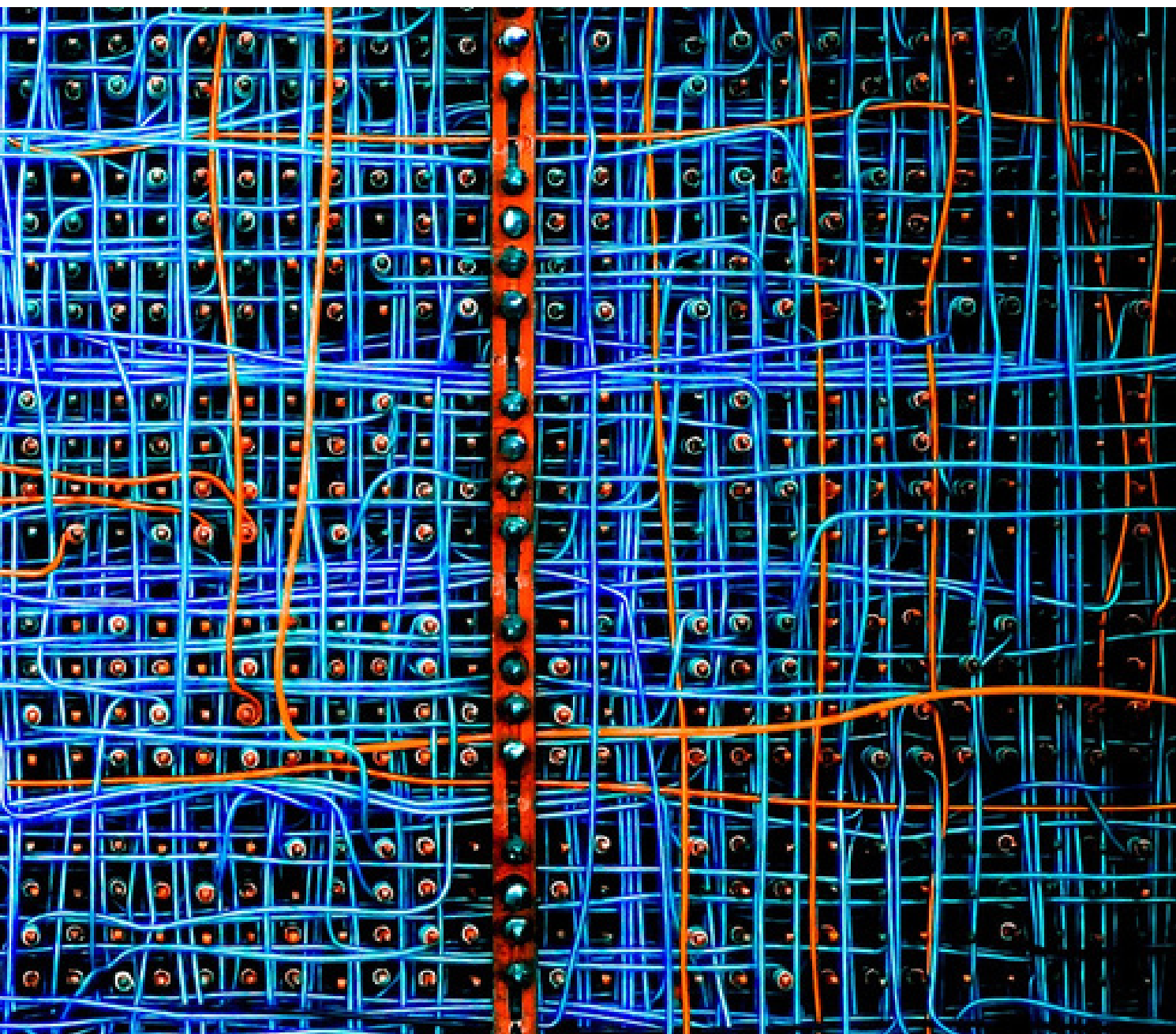
Although only basic components of the Guardian Angel infrastructure were built (and eventually commercialized—see <http://www.ga.org>), the key feature of continuous patient-centered computation, risk-assessment, and collaborative health and wellness management could not be realized with the communications and computational infrastructure available at the time (1994). But with the future state implied by The Orange Institute 2011 conference title “Sensor Networks as the new growth opportunity”, the Guardian

Angel concept that integrates external sensor data and rapidly evolving phenotype and genotype risk models is within technical reach. If available, Guardian Angel models could change the relationship between patient and disease from the current model of disease management, passive and reactive, to pro-active and anticipatory wellness management through risk management. The challenges today are much less technical than in 1994. The key issues of policy, privacy and business sustainability that were identified in the original report remain unanswered. The members of the Orange Institute 2011 have the technical skills to execute the MIT Guardian Angel vision. Can members of this group find the solutions to the non-technical barriers so that Guardian Angels can promote wellness over disease and health over illness?

In this view, data are pushed to a person who decides to accept or reject sensor data rather than having personal data pushed into the sensor network.



The middle is being squeezed on both sides. Digital consumers in a sharist world connect directly to artists, leaving the model of scarcity and controlled distribution behind. Our faculty is one of practice—we will hear from executives on the front line of reinventing their business models for a mobile and converged world.



Social Connectivity is
Rewiring the Media World



Water and Waves: the New Media World

Mikel Lejarza, Presidente Antena 3 Films

For some people, what happened these last years has been an economic crisis and a programming model crisis. It was, in their opinion, cyclical.

Since the 50's, TV has been considered a reality that linked families, opinions and habits, "the water tap about a family living" (Amanda Lotz). But things have changed: people can still watch TV, but new technologies bring new use rituals.

Last August, a survey commissioned by Comcast and published in the LA Times showed that 62% of American audiences consume TV programming whenever and by whatever means, using VOD, DVR and Internet. This percentage rose to 76% when it comes to theatrical content.

Since Andrew Lippman talked about "Digital Revolution" for first time in 1987, many things have happened in our digital life. TV companies, being a key factor in the habits and uses of society, did not take into consideration everything that started out small.

Today, everyone, even the most skeptical, agrees that we are facing an unprecedented Revolution. There are so many changes that can define what is happening.

The current and future media environment is now formulated on the basis of digitization and networking in an environment of intelligent e-services, composed by companies involved in the production, distribution and sales of advanced information and entertainment. In this Universal Digital Network, two clear trends are emerging: wide band (more and more information moving faster through the same channel) and wireless communication.

This puts the networks in the center of user activity, and not computers. With

this predominance of networks in the new communication system, telecom operators appear to assume the role, but it seems exaggerated to think about new media powers yet.

The full convergence (technological, business and social) of networks, information, contents and entertainment in a multimedia environment has not yet been accomplished and today, despite everything, there remains a strong dominance of digital TV channels to entertain or inform.

It is quite possible therefore that in the coming years, we will see the creation of new factories and new digital media companies dedicated to the aggregation of these, as well as the struggle for the control of contents and end-users among telcos, traditional companies and Internet operators.

But, this is not the only change that will appear. While consumption of audiovisual content was through TV, it was a mass audience. But today new technologies are designed for an "individual user". When,

People who think TV is dying are wrong, because the key driver of communication remains content. And without content, no business is possible.



Antenne 3's Mikel Lejarza discusses disruption in media business



And, today as always, nothing is more valuable than having a good story to tell and a passion for it.

It is almost impossible for a TV program in Spain to have a 25% market share, unless it is a sports event. But even in that case, it represents just over 3 million people in a country of 44 million of. That is to say that 40 million people will not see the program leader, over 90% of population.

The real question is to what extent should a medium be described as massive? The TV has been the best display of the common cultural ground of society—for its capacity to integrate production and deliver content to the majority of citizens. If every age has its own means of expression, television has been the fundamental language of modern society; and in recent years National Broadcast Channels have been an area of social integration. But that society has changed and now we need to create another language.

We are witnesses of a paradigm shift in the mass media, which dominated the second half of the twentieth century. As graffiti proclaimed a few years ago: "We had the answers, so they changed the questions".

The Internet has clearly brought a new language. It is also true that in many cases is still unclear where the business is. But if there are no returns on investments, it could be the end of the production of high value content and the beginning of a society where the "User generated content" will reign. This could affect product quality and could create serious problems for the sector.

However, people who think TV is dying are wrong, because the key driver of communication remains content. And without content, business is not possible.

Our time is defined by a change in the way of understanding the distribution of audiovisual content. The near exclusivity enjoyed by the TV is gone and now every person chooses how, when and where to watch what you want. Now everyone can establish their own schedule of programs. But content is still funded, promoted, distributed and produced mainly by TV. Television is the great "Super" medium of an industry more fragmented than ever.

Therefore, the future shows some certainties. This new situation proposed by new technologies requires significant legal changes; Companies will have to be redefined as large multimedia and multinational groups in order to compete; but those groups which hold content will be seated at the table of negotiation.

While TV will be a measure of telling stories that make people dream, have fun, inform themselves, and play games, television will be loved and chosen by people as the ideal companion. And, today, as always, nothing is more valuable than having a good story to tell and a passion to tell it.

where and how "you" want, compared to the traditional Prime Time for all the family together on the couch. We are shifting from Prime Time to Anytime.

Currently, the relationship between society and information & entertainment is increasingly mobile (33% of mobile phone owners access information from their terminals), customized (28% of Internet users have customized their home page) and participatory (37% of Internet users are in some network). The key is how to bring a medium design for all components of production, sales, distribution, which is to be consumed in a fixed place in the company of others in a passive mode, to the new situation?

We are in an era where big TV Channels become big Communication Groups. The audiovisual market is not local but global, focused on the press, radio or TV, in addition to Internet.



Digital Culture and Language Diversity

Santiago Miralles

Director of the Interactive Media Business in TV3



Santiago Miralles works on the front line of new media

by Mark Plakias

Vice-President of Strategy Orange Labs, SF

Mark Plakias: *All of your online assets are in Catalan?*

Santiago Miralles: Yes. One more tool for this process of normalization of Catalan in the society. There are other tools: education, universities, and so on. And also there are initiatives to ensure that everything, for example, in the administration and in the law network can be in Catalan—lawyers and judges and notaries and so on. The audio/visual is very important because it creates symbols and it creates characters, and it's important that these characters speak in Catalan. When we started, we started with the Dallas TV series, you remember? Well... the older managers of our company always said that dubbing Dallas into Catalan, meant so much because it was so popular, and 25 years watching the characters JR and Sue Ellen speaking in Catalan was a very important initiative.

MP: *You spoke very eloquently about the power of longtail to your online distribution, so one might conclude that online longtail content is good for the propagation of the language?*

SM: It has its share. Of course there is a flood of Spanish television networks that are available. At home we have 45 channels, and only 6 channels is Catalan spoken. ... There is a certain regression of language in the street. In the schools and universities they are learning Catalan, but in the street, Spanish is very powerful. So you need to reinforce, continuously, the efforts to keep the Catalan at a reasonable level. I guess the same is happening in Denmark, or in countries that are have a similar dimension as ours. In Denmark they don't have Spanish that floods them, they have instead English. And of course Danish authorities are probably doing their best to keep Danish alive and healthy.

MP: *Another online asset here is Wikipedia?*

SM: Oh yes there is. Very, very active... there is a great activity in the internet population of Catalonia... and scientific and cultural and intellectual... to produce articles for the Catalan version.

MP: *Are there any sort of native social networks that have evolved from within the Catalan language? Or is it all like Facebook and other platforms?*

SM: We have, in the past, during our first years online... we believe in communities. We built our own communities around our subjects, our programs, our characters. And we had hundreds of thousands of users. But Facebook and Twitter are unbeatable, so there's no point in defending your own efforts. It's what I said during the presentation... you have to go with them and leverage them. So we produced hundreds of pages in Facebook linked to our contents, linked to our ideas... and people become fans or not, or go in and go out, etc.

MP: *So the effect may be neutral. I mean in the sense that you can leverage that platform for Catalan content.*

SM: Of course, of course. As well as in any other language... I mean, any small country I suppose can leverage these tools. And they have been very active, the big, big platforms. For example, Google will release the Catalan version of all their services very, very soon in Catalonia and we're very happy with them. They're very active and we will help them translate things if they need help, and we have done this with Yahoo, and we're doing this with YouTube also...

MP: *And I think this is one other area I wanted to touch on. You spoke about media companies being production, distribution and sales. You talked about your partnership with YouTube.*

SM: We sell advertising on our sites, but we partner with YouTube by the means of creating [clips]... we have channels on YouTube that are linked to our content. We have a TV3 Channel on YouTube, like the BBC or any other broadcasters have. And YouTube markets that inventory of advertising and they are very, very effective. And they get good CPCs [ad rates] and we get a share of that. And that's a business that we have no effort at all to do, because we have automated the exportation of videos into YouTube. It's completely integrated into our managing consoles. And so there's marginal effort to publish on YouTube, but there's a marginal income coming from the advertising that YouTube sells on our site, but most important, the advertising that people, that videos which are ours, have been uploaded in third parties YouTube sections. If you want to upload one of our videos that you recorded from television to YouTube, YouTube will report it to us. They will say, "Hey, that video... we have deducted that it's yours. Is it so?" ...and we have a report every morning and we say, 'Yes, it's ours.' We can either remove or allow it. If we allow publication of our video, YouTube will put advertising in that video, and we receive that income. So we take advantage of the viral progression of our videos in somebody else's YouTube areas. That's a very interesting business. Very profitable.

MP: *And it sounds respectful in a sustainable model.*

SM: Oh yes, because the rights are very clear. YouTube has a fantastic algorithm to detect whether it's yours or not. We follow a list every morning, and in half an hour, we say yes, no, whatever... and from that moment everything that is published on YouTube carries advertising, and there's a share for us.

MP: *Thanks very much for speaking with us.*

orange institute
 the **Journey Continues...**
Join the **Conversation**

oct 2011

Nice

Creative
 Landscapes &
 Collaborative
 Networks

Collaboration between disciplines in the physical/biological domain and the computational domain reflect the larger quest for balance between the built and the natural world.



nov 2011

Israel

Innovation as
 Destiny



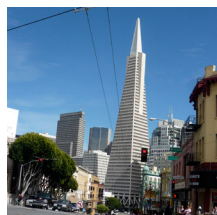
Learning from the phenomenal startup culture of Israel how innovation patterns are etched into a national asset.



apr 2012

Silicon Valley 1

Scalable Change:
 Organizing for
 Disruption



As digital assets gain in market power, organizational learning and success increasingly comes from intangible value materialized into concrete offerings.



jun 2012

Paris

Smart Living:
 Beyond
 Nations &
 Cultures



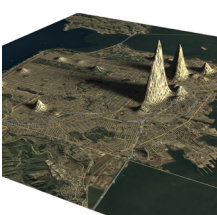
Connections between people, races, and things are bringing us towards a state of constant learning, a world of constant feedback and optimization.



oct 2012

Silicon Valley 2

Recognitions:
 Finding New
 Patterns in the
 Digital Domain



As the Web becomes increasingly visual & user contributions to its organization escalate, issues of reputation & even how we ask for information are rapidly changing. Adding to this complexity is how scalability is increasingly a matter of finding & decoding patterns.

Sources for images above:
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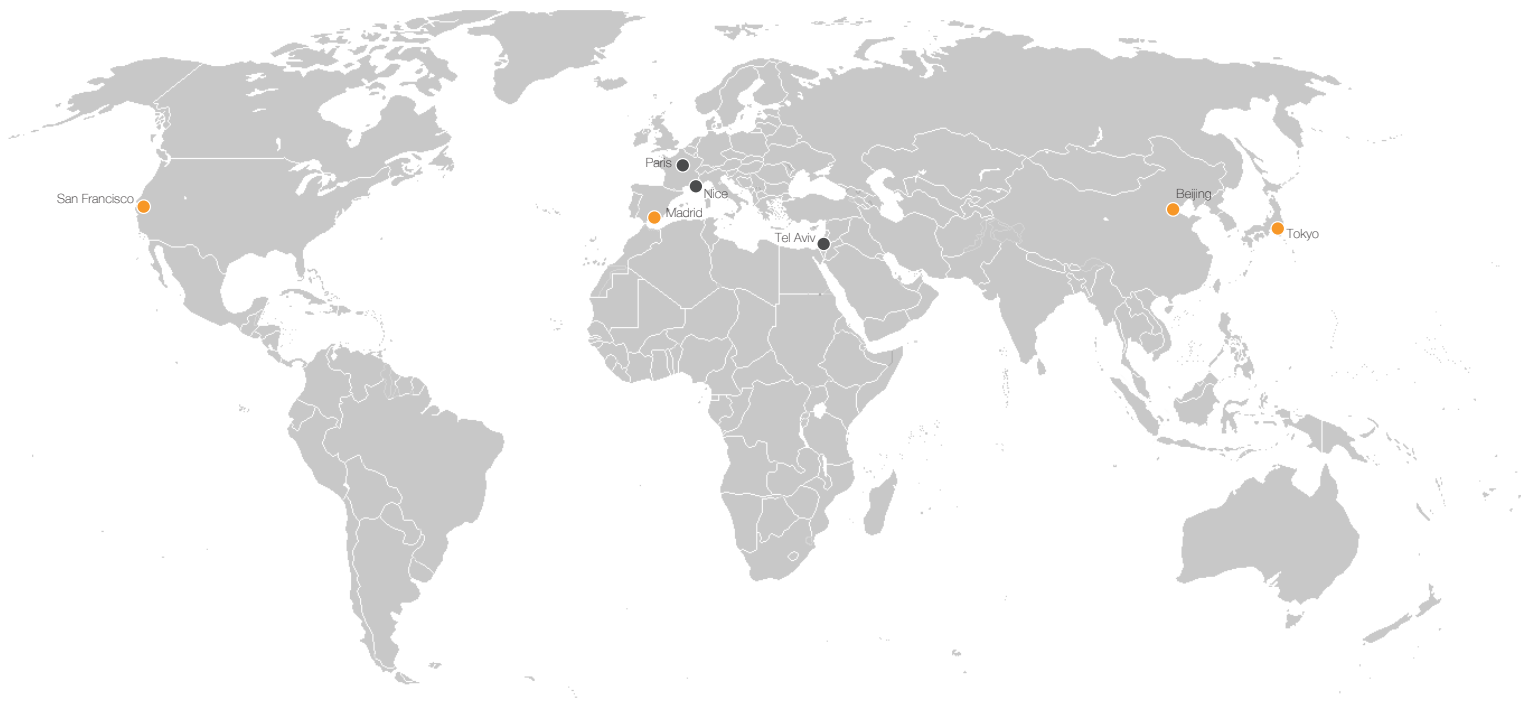




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orange institute 2010-11

- established
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