

FUTURUM

PRESS KIT

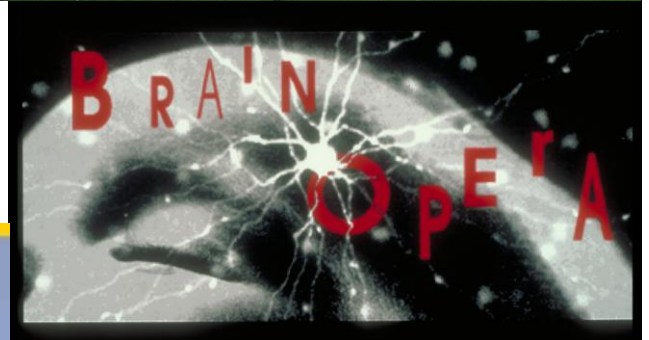
The Futurum Events: 23rd to 26th September 2010

www.associationfuturum.com



20th MONACO YACHTSHOW

MITEi
MIT Energy Initiative



FUTURUM

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PRESS RELEASE

The Futurum Association is organizing its first event in Monaco from the 23rd to the 26th of September 2010, under the High Patronage of H.S.H. Prince Albert II of Monaco and in the presence of Dr. Susan Hockfield, President of the Massachusetts Institute of Technology.

The aim of the Association is to encourage and promote futurist projects in Art in all its forms, including Science (as an Art), on an international scale.

The Futurum Events include three major functions.

Thursday the 23rd and Friday the 24th of September 2010 : **the Energy Summit**, organized by Professor Ernie Moritz of MIT, Director of the MIT Energy Initiative and of the MIT Laboratory for Energy and the Environment, will take place at the Oceanographic Museum of Monaco. This global event began with the visit of H.S.H. Prince Albert II of Monaco to the Massachusetts Institute of Technology (MIT) in October 2009. MIT is an American research university specialized in science and technology. It is renowned as one of the most prestigious universities in the world. The link between the Oceanographic Museum of Monaco and MIT is not fortuitous. In fact, both entities were constructed on the same principle: bringing together Art and Science within a monumental architectural edifice.

In the morning, various energy working groups will meet in the Oceanographic Museum of Monaco, and the official opening of the meeting will take place at 2pm. The Energy Summit will revolve around 4 key stakeholders, who will be figures interested in ecology at a global scale.

At this event, 4 MIT students will also be invited to speak and to present their prototypes of aquatic and flying robots.

Friday the 24th of September 2010 : the Salle Garnier will welcome the **world Première of the opera *Death and the Powers***, developed at the MIT Media Lab by the American composer Tod Machover. This opera was born of the meeting between Mrs. Kawther Al Abood, President of Futurum, and Tod Machover in 1999. At the time, Mrs. Al Abood was President of the Monegasque association *Les Amis de l'Opéra* (Friends of the Opera), and wanted to launch a new form of opera, modern and revolutionary, and incorporating musical, vocal and theatrical technological innovations.

It is likely that these innovations will shock rather than surprise 'purists', however it is undeniable that this innovative work will continue to revolutionize the world of Art.

Performances open to the general public will take place on Saturday 15th of September at 8pm and on Sunday 26th of September at 3pm and 8pm.

Before watching the performances, the audience will be able to visit *New Technologies in Music and in Art*, an exhibit which will take place in the Salle Garnier's Atrium. This exhibit, organized by Professor Machover will display instruments invented at the MIT Media Lab.

Saturday the 25th of September 2010 : during the **Monaco Yacht Show**, Futurum will organize a round table discussion on the theme *Tomorrow's Yachts in Clean Seas* at the Yacht Club's restaurant. The Association wanted to avail itself of the Monaco Yacht Show – a global event – to initiate a dialogue between individuals, professionals and yacht builders in order to invite them to think more deeply about marine ecology.

The participants will attend Christian Dior's Autumn/Winter 2010-2011 Collection catwalk show, during a lunch (location to be confirmed).

Mr. Arunas Chesonis, an MIT alumnus, has had the kindness to invite the participants on board his yacht *The Lady Zelda* on the afternoon of Saturday the 25th of September, for an MIT function in the Port of Monaco.

The official program of the event is enclosed, on page 15 of this document.

For any additional information, please do not hesitate to contact Futurum:
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Reservations for the opera *Death and the Powers* by Tod Machover, for performances open to the general public (on Saturday the 25th and Sunday the 26th of September 2010)
Telephone: +377 98 06 36 36 - Email: ticketoffice@sbm.mc - Website: www.digitick.com

THE OCEANOGRAPHIC MUSEUM OF MONACO, THE OPERA OF MONACO, MIT : A common approach

The Opera of Monaco and the Oceanographic Museum of Monaco are an important link between the Principality of Monaco and the Massachusetts Institute of Technology (MIT).

MIT's Great Dome Indeed, the link between MIT and the Oceanographic Museum of Monaco is not fortuitous. Prince Albert I of Monaco had expressed in 1910, at the completion of the construction of the Oceanographic Museum, his wish to *'bring together in the same glory the two directing forces of civilization: Art and Science'*. As MIT is notably an institute for scientific and artistic research, it has a similar goal: to bring together Art and Science within a monumental architectural edifice.



MIT's Great Dome

MIT, established in 1861, is an American research institution specializing in the fields of science and technology. MIT was a pioneer in laboratory-based teaching and was the first university in the United States to have curricula in Architecture (1865), Electrical engineering (1882), Sanitary engineering (1889), Naval architecture and Maritime engineering (1895)*, Aeronautical Engineering (1914), Meteorology (1928), Nuclear physics (1935), and Artificial Intelligence (1960).



Oceanographic Museum of Monaco

Initiated by Prince Albert I of Monaco, the construction of the Oceanographic Museum of Monaco began in 1899 and ended 11 years later in 1910. The Museum is entirely dedicated to the sea and encloses collections of exhibits brought back from its explorations, aquariums, and laboratories that welcome researchers from all over the world*.

Therefore, these two institutions are closely linked by their scientific method: they have both established research labs to welcome researchers from all over the world. On a more environmental note, a connection can be made between the Oceanographic Museum, entirely dedicated to the sea, and MIT, the first university in the United States to have a curriculum in Naval Architecture and Maritime engineering (1895). MIT is also a sea-grant college*, (a status granted to 30 US institutions

in 1966) involved in scientific research, education, training, and extension projects geared toward the conservation and practical use of the coasts, Great Lakes, and other marine areas. It's clear that the realm of the sea (be it fauna, flora, or architecture...) is a focal point for both institutions.

What's more, although the Oceanographic Museum and MIT are originally scientific institutions (carrying out laboratory research), both have had the desire to join Science with Art.

The Oceanographic Museum's principal vocation is to make the public aware of the role played by the sea, as much in Art as in ethnography or in the economy. Therefore, it is clear that Art has its place next to Science, as it also plays an important role in the Museum's educational process. What's more, it's notable that on the 100th anniversary of the Oceanographic Museum (2010), it housed an exhibit by Damien Hirst, a famous contemporary artist. This also expresses its willingness to bring Art closer to Science. One of the main pieces exhibited is a shark cut into slices, each slice being placed in a block of glass filled with formalin, but with enough space left for visitors to walk between the blocks, and so see the inside of the shark. Thus, this work illustrates the coming together of Science and Art, because Hirst's work is used for Science, as if to give a biology lesson to the general public.

The Salle Garnier Opera of Monaco (named for the famous architect, Charles Garnier, who also built the Paris Opera House in 1875) was inaugurated in 1879 with a performance by Sarah Bernhardt. Under the direction Raul Gunsbourg (1892-1951), the opera became one of the beacons of European operatic life, with seasons rich in ambitious works and creations. On the 18th of February 1893, the opera made an impact with the innovative scenic creation of Berlioz's *The Damnation of Faust*, staged by Gunsbourg himself, which significantly impressed Monegasque audiences. He was to continue to express a will to innovate and to promote French music. Raul Gunsbourg managed to attract the greatest singers of his age and to discover future celebrities, ensuring international renown for the Opera of Monaco. Leading creators, known the world over, appeared at the Opera Garnier, including Camille Saint-Saëns, Jules Massenet, Maurice Ravel and Giacomo Puccini.

Therefore, like both the Oceanographic Museum and MIT, the Opera of Monaco has been, since its beginning, carried forward by the search for innovation and a future-facing outlook.

What's more, between 2001 and 2005, considerable construction work has been carried out to the Monaco Opera House, notably with the aim of providing innovative stage equipment, allowing it to host the best performances in the world.

MIT, meanwhile, created the Media Lab, a department specializing into research into new technologies, and the Media Lab also serves the world of Art, as the Media Lab fostered the development, by composer Tod Machover, of new instruments for his revolutionary opera *Death and the Powers*. What's more, the Media Lab also enabled Machover to create the staging, musical and vocal innovations required for the production of this new opera.

MIT and the Opera of Monaco have both wished to extol a certain degree of avant-gardism ever since their creation. In fact, the Media Lab created new musical instruments so that it could both better express itself in current music and to stimulate inventiveness.

Finally, the Oceanographic Museum of Monaco, the Monaco Opera House and MIT are all centenarian institutions: the Museum celebrates its 100th anniversary this year (in 2010), MIT will celebrate its 150th next year (in 2011), and the Opera of Monaco celebrates its 132nd anniversary this year too.



Massachusetts Institute of Technology

Introduction

The Massachusetts Institute of Technology (MIT) is an American research institution and university, specializing in the fields of science and technology. Located in Boston, in the north-east of the United States, MIT is considered in the 21st Century as the best Western university for science and technology. What's more, MIT is one of the most prestigious universities in the world.

In the 21st Century MIT is a world-leader in science and technology teaching and research, but is also celebrated in other fields like management, economics, linguistics, political science and philosophy. The most popular course is engineering (2000 students), followed by those of the sciences.

Characteristic of MIT is its proximity to the industrial world and its strong involvement in scientific and technological research, in which students participate from their freshman year.

Using multidisciplinary teaching, MIT's mission is to transmit knowledge to its students in order to make them aware of, and invite them to participate in, the improvement of both the United States and the world in the 21st Century. Thanks to its research laboratories, their thoughts are made concrete in order to encourage innovation in scientific research.



The Stata Center at MIT

History

In 1861 the Commonwealth of Massachusetts approved a charter for the integration of the Massachusetts Institute of Technology and the Boston Society for Natural History, presented by William Barton Rogers, a scientist. Rogers sought to establish a new form of higher education to meet the challenges caused by the rapid progress of science and technology in the mid-19th Century. Once the charter was approved, Rogers began collecting funds, establishing a curriculum, and searching for a suitable location. The Rogers Plan was rooted in three principles: the educational value of useful knowledge, the necessity of learning by doing, and integrating a professional and a liberal arts education at the undergraduate level.

MIT was a pioneer in the use of laboratory education. Although MIT was originally an architecture school, it rapidly became a multidisciplinary institution. In fact, MIT was the first university in the United States to have curricula in architecture (1865), electrical engineering (1882), sanitary engineering (1889), naval architecture and maritime engineering (1895), aeronautical engineering (1914), meteorology (1928), nuclear physics (1935) and artificial intelligence (1960).

H.S.H. Prince Albert II of Monaco at MIT

☞ *Visit on the 26th of October 2009*



H.S.H. Prince Albert II of Monaco visited MIT on the 26th of October 2009, along with Mrs. Kawther Al Abood (President of Futurum) and her son Mahmoud, MIT alumnus and Treasurer of Futurum Association. During his visit, H.S.H. Prince Albert II visited various MIT laboratories, including CSAIL, the Computer Science and Artificial Intelligence Laboratory, and attended demonstrations of aquatic and flying robots created by the lab.

Enthralled by this visit, and persuaded of the importance of the link between Monaco and MIT, His Serene Highness put together an official invitation to Dr. Susan Hockfield and Professor Ernie Moritz and his team to organize an Energy Summit in Monaco.

By his strong commitment to the environment through his Foundation, the Prince Albert II of Monaco Foundation, His Serene Highness anchors the Principality of Monaco at the heart of the global challenge of environmental protection and sustainable development. Indeed, the Albert II Foundation seeks to find answers to three global issues : climate change, biodiversity and water. The Foundation also aims to encourage the fair and sustainable management of natural resources, and puts mankind at the heart of all its projects. What's more, it supports the putting into practice of novel and ethical solutions in all of the three issues it addresses, which is why MIT can be a key collaborator of Monaco's commitment to the environment: its research laboratories which imagine and create these innovative solutions.



H.S.H. Prince Albert II, the CSAIL team and the flying robot

☞ ***Visit on the 13th of April 2010***

H.S.H Prince Albert was invited to speak to MIT students in Boston, accompanied by His Excellency Mr. Gilles Noghès, Ambassador of Monaco to the USA and Mr. John Drew, Honorary Consul of Monaco to Boston. Explaining the reasons that brought him to travel to Antarctica in 2009, His Serene Highness said he was impressed by the work of the many expeditions present on that continent, and underlined the importance of international cooperation by the signatory countries of the Antarctic Treaty, of which Monaco is one. On this subject, the Sovereign underlined the contribution that his country could offer to the research teams, mentioning the development by the Monegasque company Venturi of an electric vehicle suited to extreme conditions.

After the showing of the film on his trip to the Antarctic and his participation in a panel about polar research and climate change, the Prince thanked his hosts, Dr. Susan Hockfield, the President of MIT, and the members of the scientific panel, around Professor Ernie Moniz, Director of the MIT Energy Initiative et member of President Barack Obama’s Council of Advisors on Science and Technology.

Finally, H.S.H. Prince Albert II met Monegasques studying in Boston who had learnt of his visit to MIT’s campus.



H.S.H Prince Albert II in conversation with Professor Ernie Moniz and Dr. Susan Hockfield, President of MIT



H.S.H Prince Albert II with Monegasque students studying at MIT

BIRTH OF THE ASSOCIATION:

FUTURUM

The Futurum Association was founded by Mrs. Kawther Al Abood, on the 1st of October 2009.

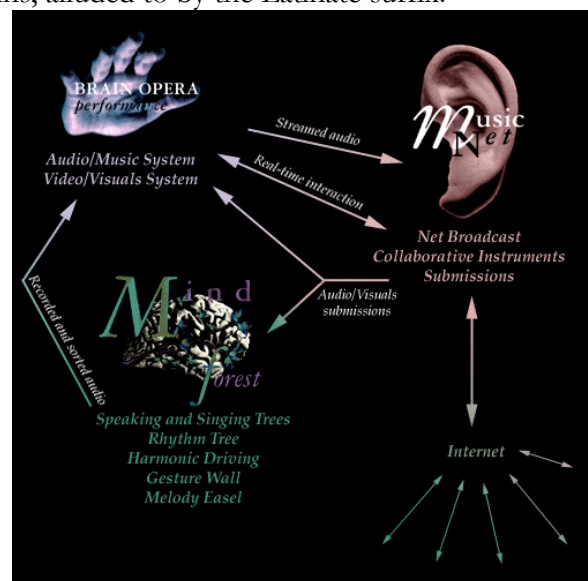
It all began when she was President of the Association *Les Amis de l'Opéra* (Friends of the Opera) between 1997 and 2002. Indeed, as an enthusiast for music (and Art in general), she invested herself heavily in the development of this association. In 6 years, Mrs. Kawther Al Abood brought together more than 450 new members, and established a patronage system. While she was trying to find a way to encourage young people to visit the opera, Mrs. Kawther Al Abood discovered the work on the Brain Opera at MIT's Media Lab (which is celebrating its 25th anniversary this year), by composer Tod Machover. As his work consisted in creating a new modern and innovative form of Opera, Mrs. Kawther Al Abood went to MIT to meet Professor Machover and to ask him to create a new opera for the Opera of Monaco. After 11 years of work, we will have the pleasure to experience the World Première of this opera, entitled *Death and The Powers*, in the Salle Garnier of the Monaco Opera House on Friday the 24th of September 2010.

It's because of this project that Mrs. Kawther Al Abood sought to establish the Futurum Association. Indeed, she always wished to encourage the development of the cultural life of the Principality of Monaco and was seeking a way of stimulating it. This revolutionary opera is ideal in this role because its aim is to innovate and to promote new ideas.

Thus, the Futurum Association was created for the opera *Death and the Powers*. What motivated the creation of the association was the idea of bringing together culture and science, and in particular the desire to reflect on the alchemy that occurs between them. The objective of the association is to promote futuristic projects in Art in all its forms, including Science (as an Art), on a global scale. Futurum wishes to encourage the participation of a generation of young artists and scientists in reflecting on the improvement of everyday life in the 21st Century. So, the association is primarily interested in projecting itself into the future, which explains the name *Futurum*, made up of the idea of the future combined with the idea of origins, alluded to by the Latinate suffix.



Mrs. Kawther Al Abood, Mr. Mahmoud Al Abood,
Mr. Tod Machover and students at MIT in 2010



Brain Opera, developed at the MIT Media
Lab by M. Tod Machover

THE ENERGY SUMMIT

Thursday the 23rd of September and Friday the 24th of September 2010 at the Oceanographic Museum of Monaco

In October 2009, H.S.H. Prince Albert II of Monaco visited MIT along with Mrs. Kawther Al Abood, in order to meet the leaders of the institution. During this meeting, they were notably able to present to H.S.H. Prince Albert II of Monaco their new project, the *MIT Energy Initiative* (MITEI). Following this, His Serene Highness invited representatives of MIT to Monaco in order to organize an energy summit in September 2010 and at the same time to present the project of the MITEI.

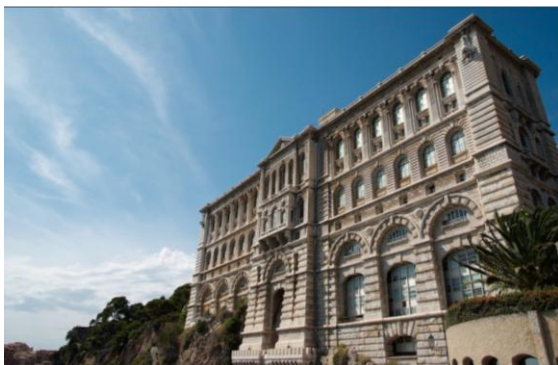
The MITEI is searching for donors to support the creation of a new class dedicated to energy, as part of the *Development Lab* curriculum. The new class would be offered to MIT graduates and undergraduates who are interested in the developing world, especially Africa, Central America and India.

Thanks to MIT's donors, research programs in renewable energy have already been put in place.

In partnership with the Futurum Association, MIT plans to develop the *Monaco-MIT Partnership in Energy Education*, a strategic investment of resources to nurture the next generation of energy leaders. This partnership will notably allow an exchange of students between Monegasque universities and MIT. The partnership's approach rests on three main pillars:

- ✧ Energy education at MIT
- ✧ Project-based learning abroad
- ✧ Energy education in developing countries

Thus, the Energy Summit, which is being held on the 23rd of September at the Oceanographic Museum of Monaco, will be organized by Professor Ernie Moniz of MIT and will consist of discussions on New Energy.



Oceanographic Museum of Monaco



THE OPERA *DEATH AND THE POWERS*

World Première on Friday the 24th of September at 8pm, by invitation

And performances on Saturday the 25th of September at 8pm and Sunday the 26th of September at 3pm and 8pm

in the Salle Garnier in Monaco

Under the High Patronage of H.S.H. Prince Albert II of Monaco

And

In the presence of Dr. Susan Hockfield, President of the Massachusetts Institute of Technology

Death and the Powers is Tod Machover's new opera, developed at the MIT Media Lab. The Media Lab is a research laboratory focused on thinking about the future, and predicting the impact of emerging technologies on everyday life. The Media Lab is nourished by a unique culture of learning by doing in its task of developing technologies that offer the possibility to people of all ages and all walks of life to imagine new possibilities for themselves and their communities.

Because of the pioneering research from which it has benefitted, this opera will have a direct impact on new technologies, media and telecoms. It will encourage and stimulate the younger generation's interest in the Arts combined with to Science. It will also allow young people to discover and appreciate opera. The choice of the composer of *Death and the Powers* was to place on stage beautiful voices, although not necessarily big names of the opera world, in order to ensure that the popularity of this new opera doesn't depend solely on the popularity of its singers.

Death and the Powers is a one-act work that tells the story of Simon Powers, a successful and powerful businessman and inventor, who wants to go beyond the bounds of humanity.

Reaching the end of his life, Powers faces the question of his legacy: "When I die, what remains? What will I leave behind? What can I control? What can I perpetuate?" He is now conducting the last experiment of his life, passing from one form of existence to another in an effort to project himself into the future. Whether or not he is actually alive is a question: Simon Powers is himself now a computer, The System. His family, friends and associates must decide what this means, how it affects them, and whether to follow.

The instrumentation for the opera calls for a small ensemble (ca.10 players: 5 strings, 3 winds, 1 percussion, 1 keyboard) located in the pit. The vocal music will range from the lyrical, expressive singing of members of the Powers family to the "voice" of Simon Powers—careening between speech and song, memory and immediacy, breath and bravura—that is at once expiring and transcendent.

Simon (bass-baritone), though physically offstage much of the opera, will always have his presence felt on stage by communicating directly through The System. His "interludes" allow the audience to glimpse Simon's changing inner state. Miranda (soprano), Evvy (mezzo soprano), and Nicholas (tenor) will sing in traditional fashion on stage.

Innovative techniques have been designed by MIT especially for this opera, and particularly for the role of Simon, whose performances mostly take place off-stage. Technological performances

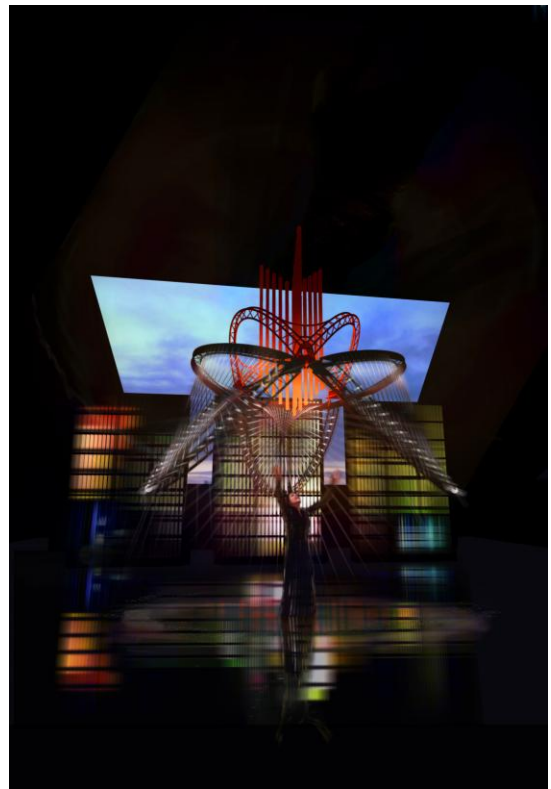
have also been developed by MIT for the robotic “Chandelier” which is both a beautiful, compelling object as well as a subtle, resonant musical instrument.

Special sound projection techniques will be used so that everything will have a lovely, shapely, three-dimensional quality.

As for the scenography, the stage will represent Simon Powers’ house, but this room will gradually reveal itself to be a vast, interconnected, intelligent system—Simon has turned himself into the room, or vice versa. To accomplish this effect, an unusual set will be designed and built that will allow the room itself to appear to change its shape, undulating, vibrating, pulsating, or pounding.



Operabots



Evvy and the Chandelier



M. Tod Machover



Salle Garnier, Monaco Opera House



MONACO YACHT SHOW 2010

The Futurum Association wished to take advantage of the global event that is Monaco Yacht Show (from the 22nd to the 25th of September 2010), to establish a dialogue between individuals, professionals and constructors in order to engage with them on the theme of marine ecology. Indeed, the Monaco Yacht Show brings together professionals of the worldwide leisure yachting industry (dockyards, brokers, designers, equipment manufacturers, service companies) including the 500 international leaders of the yachting industry and related activities.

Since 2005, the Monaco Yacht Show has been committed to protecting the environment, becoming the first Monegasque event to earn the CarbonNeutral® certification.

Raised to the rank of the world leader of pleasure yachting shows by professionals from the industry, the Monaco Yacht Show uses this notoriety and the value of the example it sets to assert its commitments towards the environment. Indeed, of its own initiative, the MYS has committed to pay an eco-tax to The Carbon Neutral Company in order to finance ecological projects. This company manages an international program to stabilize the concentrations of greenhouse gases in the atmosphere by quantifying the emissions caused by the activities of the companies involved.

For the Monaco Yacht Show, it is evaluating the emissions linked to the air and land transport of the participants, to hotel stays, to electricity consumption and waste generated.

In parallel, the Monaco Yacht Show underlines its commitment to the environment by awarding a prize, the *Green Star Plus Award*, to the yacht whose construction has followed the strictest ecological standards.

Tomorrow's Yachts in Clean Seas

On the final day of the MYS, on Saturday the 25th of September 2010, the Futurum Association will organize discussion groups at the Monaco Yacht Show's Restaurant, on the theme *Tomorrow's Yachts in Clean Seas*.

The participants to these discussion groups will then be able to visit the Monaco Yacht Show. Lunch will be followed by the catwalk show for the Christian Dior Autumn/Winter 2010-2011 show (location TBC).



OFFICIAL PROGRAMME

Thursday 23rd of September

- 9am : Working groups on renewable energy, at the Oceanographic Museum of Monaco
- 2pm : Official opening of the meeting, at the Oceanographic Museum of Monaco
- 6pm : Cocktails at the Fairmont Hotel, in the Galerie Crystal
- 8:30pm : Supper at the Fairmont Hotel

Friday 24th of September

- 9am : Meeting at the Oceanographic Museum of Monaco
- 5pm : Cocktails the Hermitage Hotel, in the Salle Belle Epoque
- 7pm : Presentation of Media Lab inventions at the Atrium, Salle Garnier
- 8pm : World Première of the opera *Death and the Powers*, in the Salle Garnier
Private Soirée, by invitation
- 10pm : Supper at the Hôtel de Paris

Saturday 25th of September

- 9am : *Tomorrow's Yachts in Clean Seas* discussion groups as part of the MYS
Visits, of the Yacht Show in small groups
- 1pm : Lunch, followed by the Christian Dior Autumn/Winter 2010-11 Collection catwalk
show
(location TBC)
- Afternoon : Trip to art galleries
- 5pm : MIT Reception on board the yacht The Lady Zelda
- 7pm : Presentation of Media Lab inventions at the Atrium, Salle Garnier
- 8pm : The opera *Death and The Powers*, Salle Garnier
European Opera Directors and journalists invited
Reservations open to the general public
- 8:30pm : Supper at the Métropole Hotel, Robuchon Restaurant, 2 Michelin stars

Sunday 26th of September

- 2pm : Presentation of Media Lab inventions at the Atrium, Salle Garnier
- 3pm : The opera *Death and The Powers*, Salle Garnier
Music school students invited
Reservations open to the general public
- 5:30pm : Cocktails at the Hermitage Hotel, in the Salle Belle Epoque
- 7pm : Presentation of Media Lab inventions at the Atrium, Salle Garnier
- 8pm : The opera *Death and The Powers*, Salle Garnier
Reservations open to the general public