

New SINGULUS TECHNOLOGIES Management Board



Management Team of SINGULUS TECHNOLOGIES

Dr.-Ing. Stefan Rinck
Chief Executive Officer CEO

Dipl.-Oec. Markus Ehret
Chief Financial Officer for
Finance, Controlling, Human
Resources and IT, CFO

Dr.-Ing. Anton Pawlakowitsch
Board Member Responsible for
Technology, Research and
Development, COO

Mr. Roland Lacher returned from his position in the Executive Board as Chief Executive Officer to the Supervisory Board of SINGULUS on April 1, 2010.

At the same time Dr.-Ing. Stefan Rinck became CEO and Chairman of the Executive Board of the SINGULUS TECHNOLOGIES AG on April 1, 2010. He had been a member of the Executive

Board of SINGULUS TECHNOLOGIES as of September 1, 2009 and in parallel Dr.-Ing. Rinck was also appointed as member of the Executive Board of the STANGL Semiconductor Equipment AG.

Additionally the Supervisory Board of SINGULUS appointed Markus Ehret (43), graduate Economist, as member of the Management Board

of SINGULUS TECHNOLOGIES AG effective from April 19, 2010. He assumes the function of Management Board member for Finance/ CFO and takes over responsibility for the areas Finance, Controlling, Human Resources and IT.

Since January 1, 2007, Dr.-Ing. Anton Pawlakowitsch is responsible as COO for the company's technology divisions.

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- Blu-ray, 3D and more

Invitation: Seminar PV Production Technology at the MEDIA-TECH 2010

SINGULUS TECHNOLOGIES is pleased to invite you to a seminar about PV Production Technology during the MEDIA-TECH 2010 Global Expo and Summit from May 19-21, 2010 at the Forum, Messe Frankfurt, Germany!

Join SINGULUS on May 19 or 20, 2010, 2.00 pm at the Forum, Messe Frankfurt, Meeting Room Analog 1 and get to know the SINGULUS solution for economical photovoltaic cell production.

- _ Optical Disc – How can we develop new business in the solar segment?
- _ Solar Technology – Today's and tomorrow's challenges
- _ Solutions for thin film solar cell production
- _ Solutions for silicon solar cell production

For registration please send an email to:
Saskia.Schmidt@singulus.de



Solar Industry Back to Growth: Up to 40 % Plus Expected

Solar energy increasingly emancipates itself from governmental incentive programs and start-up financing and moves rapidly towards grid parity. In addition to photovoltaics (PV) this also includes CSP (Concentrating Solar Power) power plants, such as the DESERTEC project in the Sahara for example. Solar heating also continues to play an important role. The global PV industry was caught in a crisis at the end of 2008, which is resolved only slowly. After its booming years the solar market was slowed

down to zero growth in 2009. Since the beginning of 2009 prices for solar panels have declined by 30 to 40 %. (Sarasin study 11-2009). The German and European cell manufacturers are under massive pressure and due to international competition they are forced to reduce production costs significantly. In contrast, consumers benefit from this favorable price trend. Accordingly, consumer investments into solar technology have increased substantially since the second half of 2009.

Grid Parity Goal Very Close

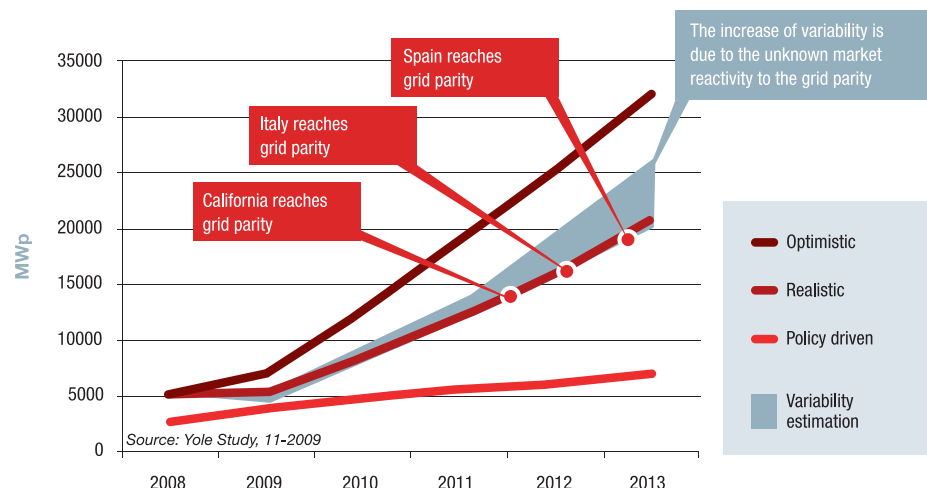
The Yole study from 11-2009 demonstrated that California will be the first area to reach grid parity. This is expected for 2012. Later on, Italy with its high price of electricity, will reach the parity by 2012, followed by Spain. Germany and many other countries will reach it in the 2014-2015 period.

The demand triggered by those events will be in a completely different order than what

is known today. However, big challenges are expected:

- _ How much will the network be able to accept?
- _ What will be the modification of the installation? Net metering, storage, filters...
- _ Will electricity operators add taxes on PV installations?

Photovoltaic Demand Forecast



New Business Opportunity in the Solar Market

The ongoing debate today is whether solar photovoltaics (PV) will emerge from its niche position within the energy sector to become a larger part of our power generation portfolio.

Right now, PV costs are higher than other solutions today – including other renewables. But the overall trends and recent progress within the PV industry reveal that grid parity is close solar and poised for major growth.

More competition across the entire solar industry is accelerating the pace of technology development, overcoming bottlenecks and reducing costs. And as installed capacity increases, the solar industry is learning faster.

To put this progress in perspective, today PV module costs are 10 times cheaper than what they were 30 years ago. Even more impressive is the reduction in installed PV systems costs of more than 30 percent in the U.S. and even more reductions in Germany where competition has become more fierce over the past decade.

Despite the financial crisis, investor interest in solar technology continues to be strong. Solar PV held the distinction of having more venture

capital and private equity funding funneled into it than any other technology on the planet from 2006 to 2008.

Millions of dollars are being invested by photovoltaic (PV) panel manufacturers to ramp up production capacity in expectation of high sustained growth in PV demand. Bold ideas like solar towers and solar farms are being tested by utility companies to augment their

capacities and hedge against fossil fuel prices. In the midst of all these, many interesting and profitable solar energy based business ventures have been set up by small to medium entrepreneurs.

Many Optical Disc Companies, e.g. Moser Baer Photo Voltaic, and others already decided to go into the photovoltaic market and look for new challenges and opportunities.



SINGULUS Enables Cost-Effective CIS/CIGS & CdTe Thin Film Cell Manufacturing

Thin film solar panels offer specific advantages compared to the silicon solar technology. Amongst them is the fact that the efficiency is retained during periods of weak sun intensity and that they are very easily integrated into architectural design elements. STANGL designs and produces high-tech systems that are used for fully-automated application of the single-sided wet chemical coating. STANGL is world market leader with the TENUIS wet process equipment for thin film

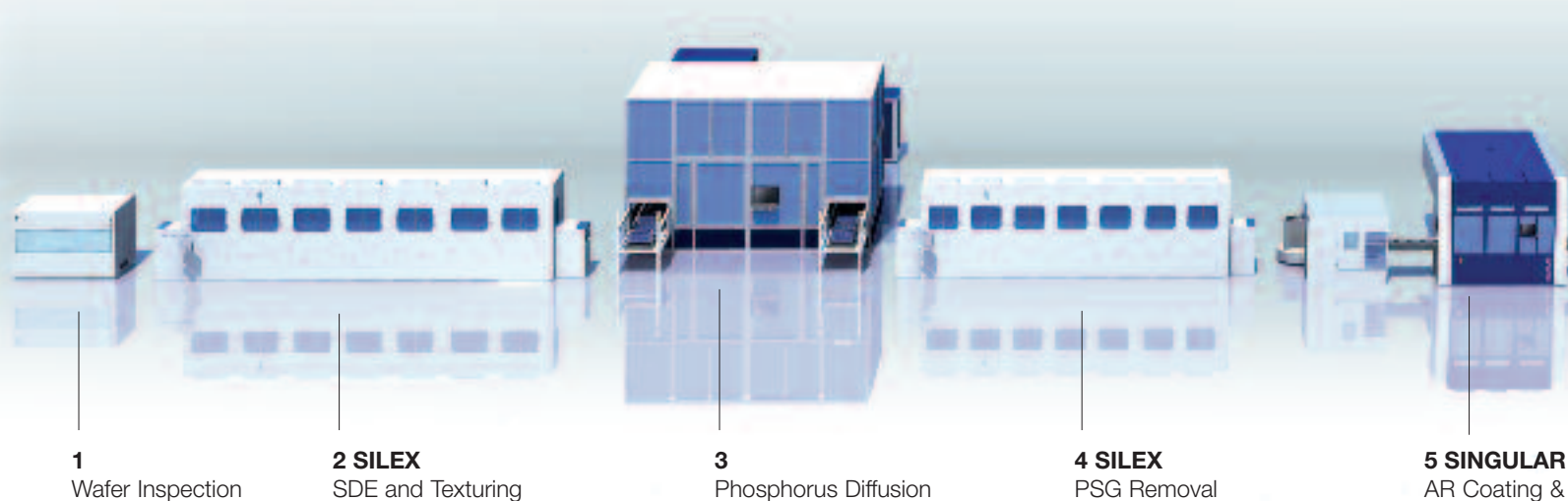
solar cells on glass. Wet processing from STANGL is a very high performing and cost-effective manufacturing process.

SINGULUS is developing several new production concepts for the thin film solar technology segment. In the area of thin film solar technology an excellent market position has already been achieved with STANGL equipment for CIS and CdTe applications.

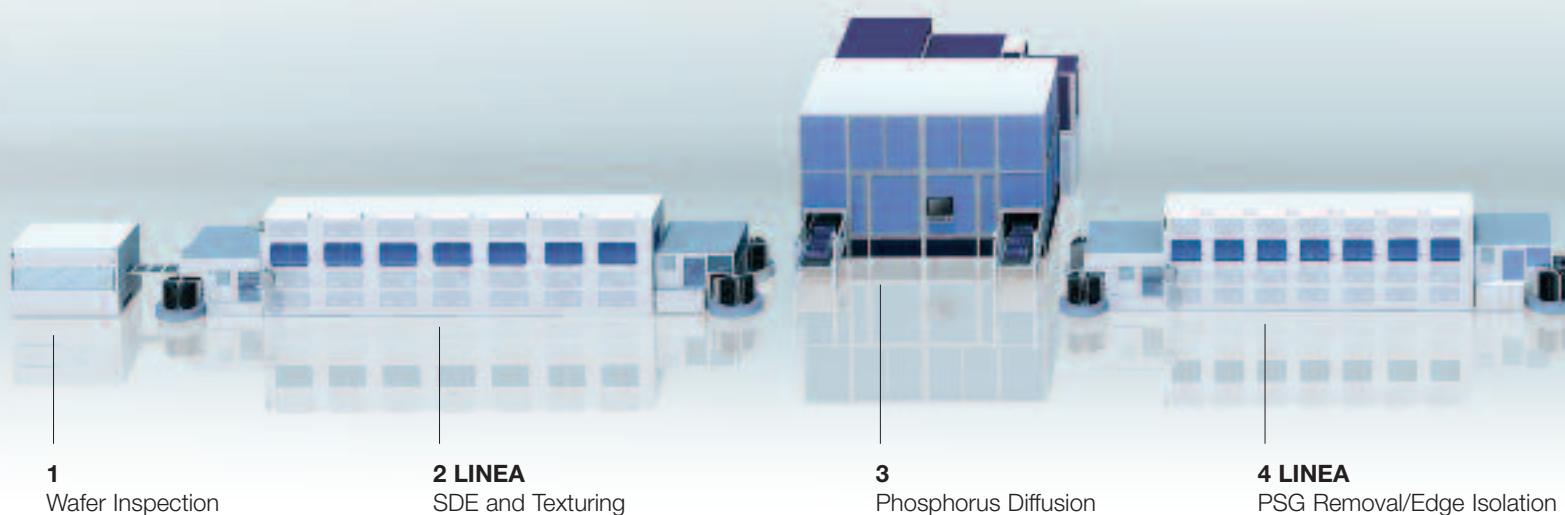


SINGULUS System Business for Silicon Cells

SOLARE System for Batch Production of Silicon Wafers



SOLARE System for Inline Production of Silicon Wafers





Silicon Solar Technology Transition from Machine Supplier to System Provider

SINGULUS TECHNOLOGIES is the world market leader in manufacturing mass production equipment for Optical Discs CD/DVD/Blu-ray. With the acquisition of the solar company STANGL, the foundation was laid to establish SINGULUS in the photovoltaics market.

Numerous new products were developed and made marketable at SINGULUS and STANGL. The company's target is to position itself at the forefront for the introduction of new technologies with respect to silicon solar technology. SINGULUS will offer a broad product range of

new machines for the photovoltaics industry, offering manufacturers of silicon cells new production technologies and therefore particular cost advantages.

Especially during times of cost pressures in the photovoltaics market the interest regarding new plant concepts increases. SINGULUS entered strategic partnerships to offer front-end technology for the production of silicon solar cells as a one-stop supplier as well as complete, integrated production systems. Such complete systems cover all individual production steps from the first cleaning process of the silicon wafer to the finished silicon solar cell.

In the future SINGULUS will focus rigorously on the system activities with production equipment for solar cells and leverage the know-how of coating and automation technology, wet-chemical processes as well as system concept. SINGULUS TECHNOLOGIES offers the key-technology for a crystalline silicon solar cell production line with wet-chemical systems from STANGL for saw damage edge & texturisation as well as PSG removal and the SINGULUS vacuum coating and wafer handling technology. This enhancement of the business model from single machines towards systems was also successful in the Optical Disc market some years ago.

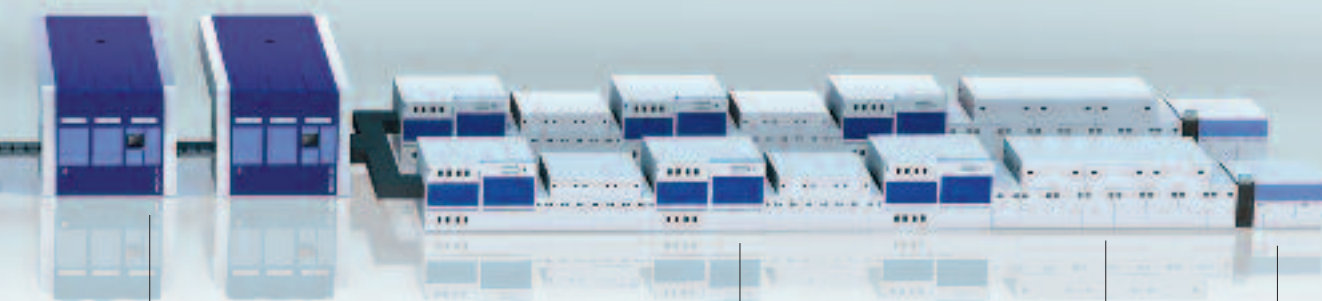


Passivation

6
Printing

7
Firing

8
Edge Isolation &
Testing/Sorting



5 SINGULAR
AR Coating & Passivation – 2 Systems

6
Printing

7
Firing

8
Sorting/Testing



CrystalLine The Obvious Choice

CrystalLine mastering systems operational on three continents are daily cranking out commercial titles to serve local and special markets. Remote access, delivered through the SINGULUS MASTERING specialists easy and swift – and independent of erupting volcanoes.

Recent developments in waveshaping and close monitoring and tuning of the galvanic process and stamper making have widened the process windows of the system to a level where yields well beyond 90 percent are no longer academic. CrystalLine has matured into a true in-line, fully automated production system. Upcoming software additions will even further increase its ease of operation and enable maximized unattended operation. The latest Blu-ray features, including 3-D BD, pose no challenge to the CrystalLine. In parallel with the increasing demand for the SINGULUS BLULINE replication lines, also the need for Blu-ray mastering comes up. In order to be independent and competitive, while at the same time appreciating the low production costs per master, CrystalLine is the obvious system of choice.

DMS Evolution Still Going Strong!

With several already finalized installations during the first quarter of 2010, the DMS EVOLUTION keeps confirming its strong position being the most popular CD/DVD mastering platform. The installations have been done at customers in the typical high-tech markets. Recently, two DMS EVOLUTION systems have been installed in Korea, and the upcoming installation in Japan is the second system in this country. The platform clearly meets the high standards of top players in the Optical Disc market and is as such recognized by this typical customer base with concrete purchase orders. Apart from these installations, a further delivery in 2010 has been done to PR China.

MPO FRANCE Accepts CrystalLine Blu-ray Mastering System

In March 2010, the Singulus Mastering CrystalLine BD mastering system passed the final acceptance test with flying colors. The final acceptance test run was based on an extended period of a full week production, during which an overall yield of well above 90 percent was shown. This figure represents the overall yield, and covers all processes for stamper making (mastering, electroforming and stamper finishing). Jitter levels were in average consistently below 5.5 %. Since 2009, the CrystalLine has been geared up to master commercial Blu-ray Disc titles for the fast growing French and European markets. Being equipped with both in-house Mastering and Replication for Blu-ray, the MPO Group again confirms its prominent position as independent Optical Media manufacturer.



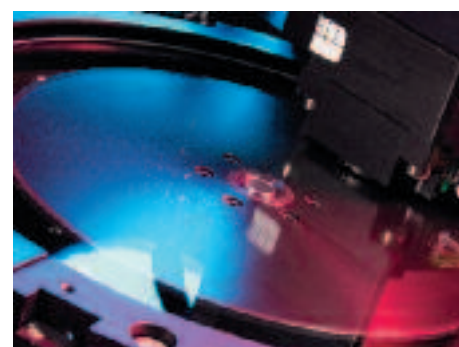
Jean-Michel Houdou | Electroforming Dpt. Manager MPO
 Danny Beuckelaers | Mastering Engineer Singulus Mastering
 Jean-Luc Delangle | Pre-Mastering / Mastering Dpt. Manager MPO
 Michel Souty | Senior Process Engineer / Replication Dpt. MPO
 Jean Huet | Process Engineering Manager MPO
 Erik ten Brink | Project Manager Singulus Mastering

CrystalLine for High Speed Blu-ray Mastering

Already during the definition phase of the CrystalLine, the future need for a higher than the initially introduced 1R recording speed was clearly recognized.

In anticipation of this, all mechatronic systems in the CrystalLine, like for the control of rotation, translation and focus, have from the design stage onwards been developed for operation with a recording speed of up to 3R at minimum. In the past months, the SINGULUS proprietary PTM process has shown to allow higher recording speeds. The first in-spec recordings at 1.5R speed have already been made, while the process still offers considerable room for further fine tuning. As the PTM process has proven not to be a limiting factor, further speed increases are expected to follow in due course.

SINGULUS MASTERING has scheduled the commercial release of a first recording speed increase in the second half of 2010.



News from the DEG Blu-ray Disc sales up 74 % in Q1

- _ Blu-ray disc sales continued to rise in the first quarter of 2010, up 74 percent compared to the same period in 2009.
- _ Studios shipped some 34 million Blu-ray discs to retail during the quarter, according to figures compiled by Swicker & Associates on behalf of the DEG.
- _ While Blu-ray rentals were up 36 percent during the quarter, total rental activity was down 14 percent year-over-year, largely as a result of brick and mortar store closures, according to Rentrak's Home Video Essentials.



BLULINE II

Platform for High Quality Blu-ray Disc

The success of 3D in the cinemas is encouraging: Hollywood Studios are increasing production of 3D movies, broadcasters are preparing to launch 3D channels, and the consumer electronics industry is preparing a whole range of 3D TVs and Blu-ray players. SINGULUS TECHNOLOGIES is supporting these activities with the right replication equipment for 3D Blu-ray Discs!

Hollywood Studios want to take advantage of the enormous storage capacity of Blu-ray Discs in order to deliver an unprecedented picture and audio experience in high-definition quality to the home consumer. The Blu-ray format has definitively established itself as

the new standard in the market. High-definition television or "HDTV" (Full HD and 3D), combined with the Blu-ray video format, is the new technology of the media sector. The market introduction of the 50 GB Dual Layer Blu-ray Disc was a showstopper for the entertainment industry. The high storage capacity of the format enables optimum audio and video high-definition quality and also offers the ability to store bonus material such as additional trailers, interviews with directors and stars as well as BD-Java-based applications, enabling viewers to enjoy an interactive movie experience never before possible. The Blu-ray Disc will initially be the only method of delivering full HD(1080p) 3D content to homes.



SINGULUS' experience in the field of Blu-ray goes back to its early partnership with the format developer Sony in 2005. SINGULUS has already a large number of production lines installed at over 30 replicators around the world.

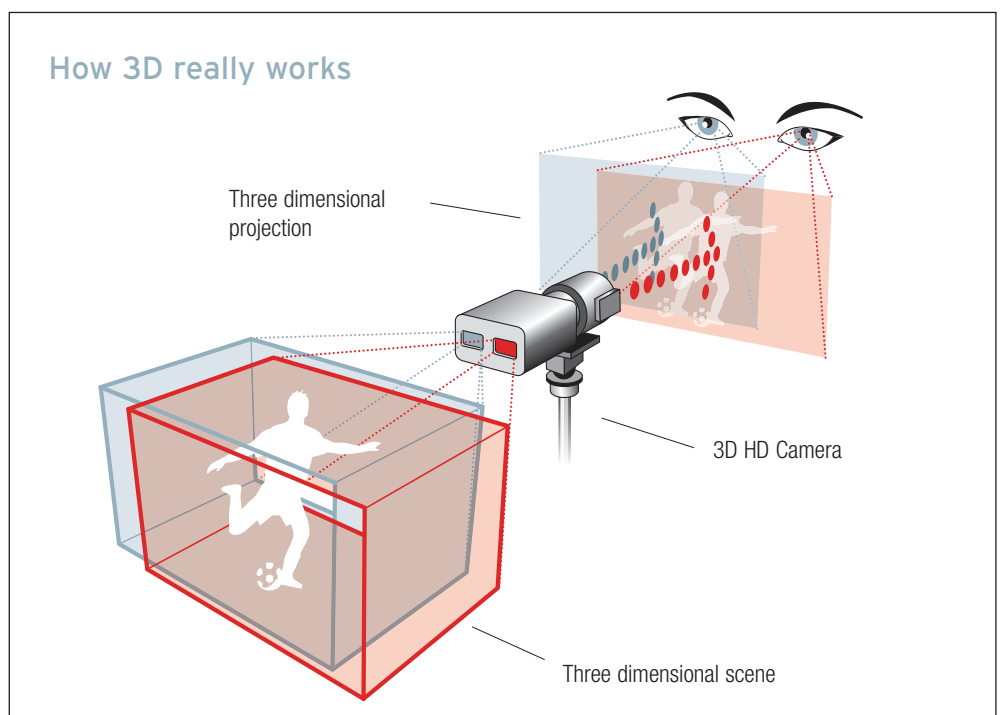
The Third Dimension 3D is a Revolution

3D films have existed in some form since 1890, but until 2010 had been largely relegated to a niche in the motion picture industry because of the costly hardware and processes required to produce and display a 3D film, and the lack of a standardized format for all segments of the entertainment business. Nonetheless, 3D films were prominently featured in the 1950s in American cinema, and later experienced a worldwide resurgence in the 1980s and 90s driven by IMAX high-end theaters and Disney's themed venues.

The media sector is facing an additional technological revolution with 3D TV sets. 3D TV sets were in the spotlight at the electronics show CES in Las Vegas. According to the Consumer Electronics Association already 4.3 million HDTVs with 3D functionality could be sold in the US in 2010. Almost all of the consumer electronics companies have announced new, 3D enabled TVs. The euphoria for the market success of the new TV sets is big. Commentary of the Samsung TV boss Boo Keun Yong: "3D is a bigger revolution than the transition from black-and-white TV to color" (FAZ, March 15, 2010).

Box office success of the movie Avatar produced by Twentieth Century Fox makes the entire sector exciting for a new growth boost. The studios of Disney and Dreamworks are working on

several 3D movies and announced to produce all animated movies in 3D format in the future. Also Japanese movie studios follow this trend with their TV animation movie projects.



Fascination 3D

BLULINE II – Blu-ray for the 3rd Dimension

The industry leading replication machine for the daily mass production of Blu-ray Discs – now playing in 3D.

BLULINE II – The platform for high quality Blu-ray Discs.



SINGULUS 

Smart Solutions to Drive the Future.

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