

First IMA Digital Event successfully held

New concept for Cutting Rooms in our industry unveiled



On December 3, the first IMA Digital Event, which was organized by IMA SpA, was successfully held. The idea was to introduce a general concept that must always be taken into consideration when we speak about any Cutting Room. It is like a philosophy that first of all requires an open-minded vision of all the aspects, parameters, and conditions that affect good results with any workflow in any Cutting Room.

IMA has been active for 43 years and our aim has always been the same: the integrated and optimized management of the Cutting Room. The process seems really complicated and, of course, it is. But, at the first IMA Digital Event, IMA wanted to make it very simple for everybody involved, and have them understand the complete workflow before taking into consideration the individual phases (MAXIMA CAD System, Chronos robot, Phoenix spreader, new Polaris labelling machine, and new Tempest Plus cutting machine applying the etherCAT protocol). There was a powerful PowerPoint presentation and a video showed the entire line in operation.

Most customers told IMA “It was impressive!”

“It was a truly well-prepared presentation featuring very interesting content, without ever being boring!” IMA was very satisfied with the responses and with the 549 contacts IMA made:

- Version Italian language: 217
- Version English language: 197
- Version Russian language: 85
- Other contacts: 50

IMA had a really great result considering it was the first time it had used digital for an event. A big effort was made

with a lot of energy to arrange everything. The launch of the first IMA App, I AM IMA, was also a great success. More than 300 people downloaded and installed it. Now, IMA has to take advantage of these achievements by getting back to work and concentrating on new projects. IMA is already working for its customers by meeting their ever-changing needs. IMA never stops—#alwaysahead

The IMA Digital Event included an opening speech from Mr. Mirella Sardini, President of IMA SpA, as well as an explanation of the Digital Event concept (an explanation of the whole cutting process) from Mr. Marcello Cecconi. In addition, Mr. Manzo, an IMA R&D representative, provided details on new products. The four new products below were announced at this event.

- Maxima CAD
- Chronos: robot for handling and managing cloth rolls—new product
- Polaris: labelling machine—new product
- Tempest Plus: automatic cutting machine—new product

A detailed step-by-step overview of the IMA Digital Event is provided below.

Opening Speech of IMA Digital Event on December 3 by Ms Mirella Sardini, President of IMA SpA



Finally here we are!!!

I would like to welcome all those who are connected to the first IMA digital event and to many of you I also extend a “welcome back” because this moment of sharing will allow us to be once again all together, although in a way that is certainly different from our last meeting in 2017, on the occasion of the celebration of our 40 years of activity, where there was a total union.

Obviously, I do it primarily with the entire IMA sales force which plays a fundamental role as it represents the link be-



tween all of you, customers and collaborators, and the company. I therefore invite Gianpietro Rossi, our commercial director, to come on stage and to follow all our Area Sales Managers Massimo Vignati, Marco Bosetti, Marco Sacella, Giacomo Carbonari, Mattia Bertoli, Franco Bertoli and finally Vinicio Gottardi who is the our technologist, the historical memory of IMA, but because of his knowledge of the Cutting Room he is also always ready to lend his support to the sale part.

It seemed right to open the event with you who are the ones who convey the image of IMA all over the world, who are in close and direct contact with the people connected today and who know them more than anyone else and have often created also sincere relationships of trust and confidence. And I also wanted to thank you personally for the work done in this strange and difficult year for the whole IMA and for you in particular, who most of all had a consolidated relationship and daily confrontation with Mr. Sardini. So thank you very much !!!

I am very excited and moved, now I thank you from my heart for your PRESENCE today, because this event has a very special meaning for me, for us and for the whole IMA. A year after the sudden demise of Mr. Sardini, it really wants to be first of all a tribute to our Captain who still remains PRESENT today in each of us, but certainly also in those of you who knew him. He left us a great legacy, many beautiful and meaningful memories and teachings, he gave us the strength in this difficult year to move forward in that project he started and shared with us all. This is therefore the first reason for the name "I AM PRESENT" because, as we have already said and communicated several times, we can also be present from afar and we certainly like to think that our Captain is today wherever we are to always transmit his strength and his energy. At the end of this brief memory I would like to share a message received from one of you, his beloved customers, and that really moved me as a daughter and as her close collaborator. So I read an excerpt which in my opinion describes and represents it perfectly. ... "I had

the pleasure and honor of meeting Mr. Sardini and working directly with him in the past years. I have always had the impression that he was a great person and a great entrepreneur: charismatic, present in defining the strategy, involved in everyday life, but able to delegate and surround himself with young people to bet on. Everyone has always talked about him with respect and loved him. His direct involvement in the relationship with our Group allowed us to change the page in the management of our Cutting Room and allowed us to cover new needs, such as that of foam management. I am sure that you will be able to carry on the industrial, organizational and moral legacy that it has left you ".



And now we can continue with the event. I am sure that he is watching us and he is following our every single step with all the pride and approval of a Captain for his crew !!!

I AM PRESENT is positivity, it is a message of trust/confidence that we want to convey to you. We are here, we are in fact present despite everything and, indeed, what has presented itself as a great obstacle to the activity has been reinterpreted and revised by us from a different perspective, as an opportunity to improve, to change skin, to continue to develop new technological solutions to meet the evolving needs (today more than ever) of our customers.

I AM PRESENT is connection, involvement and participation, the same that reduces distances and makes PRESENCE possible even from one end of the world to the other. The presence here today is what unites one to the other and makes us our strength.

And finally, I AM PRESENT is continuity with the previous event, from which it draws inspiration and strength and sets a new starting point because our gaze is always directed to the future. The past is only the fertile ground on which to build and sow new goals. So as in 2017 I AM IMA was the leitmotif of the 40th anniversary celebration, today I AM IMA is the new IMA application that was launched to announce the event and that will obviously be exploited in the future for other goals and I AM PRESENT is also our desire and our enthusiasm to BE THERE despite everything.

Before getting to the heart I would like to present another figure strongly desired by my father, who joined us in his last months of life and who is helping us in that ambitious goal of the path of change underway at IMA. I'm talking about the industrialization of processes, a really important and demanding target on which we are working. I call Mr. Marco Colombo, the new operational director of IMA, to come on stage.

Now I would get to the heart of the presentation and pass the word to Marcello Cecconi, our software development department Manager who, before the actual introduction of the new technological products, will talk to you about the IMA philosophy in the Cutting Room. A philosophy that starts from an open and aware vision of all the aspects to be taken into consideration in that workflow that has been involving us for 43 years and that every day pushes us to grow for an increasingly integrated and optimized management of your Cutting Room .

I wanted to thank all those who have downloaded our App, I AM IMA and who have therefore followed all the way towards this first digital event. Among other things, we are getting several questions to which, due to time problems, we cannot answer now, but we take care to do so as soon as possible. We have considered 6 questions for which I ask our competent technicians to return to the stage to give an initial answer.

We have come to the conclusion of this pleasant meeting. I hope it was a good moment for you too, but above all interesting for the new ideas presented. We are approaching the end of this year, therefore we take our leave, wishing us and all of you a peaceful 2021, which is better than what is ending, which can give us back the most important thing that has taken away from us, namely the possibility of traveling and confronting ourselves again.

I thank you again for your presence and sharing and we hope to see you again live next time. However, we are already working on new projects and therefore our Innovation Lab is already projected into the future as always for 43 years now ... Goodbye to everyone!!!

IMA Digital event

Workflow description

by Mr. Marcello Cecconi of IMA SpA

The role of IMA SCR begins at the precise moment in which your management system (ERP) generates the launch into production, having previously checked the availability in the warehouse of all raw materials (fabrics, linings, adhesives, padding ...) and accessories (buttons, tags, envelopes, hangers ...). In this phase, the system evaluates the need for the materials to be cut based on the consumption forecast in the bill of materials.

This is where CUTPLAN immediately comes into play. It analyzes in detail the production lot, which in summary consists of the number of garments to be produced for each size and color, and which usually has a "pyramid" structure for the central sizes; knows exactly your production methods and capacities and is therefore able to offer you the best cut-



Mr. Marcello Cecconi of IMA SpA

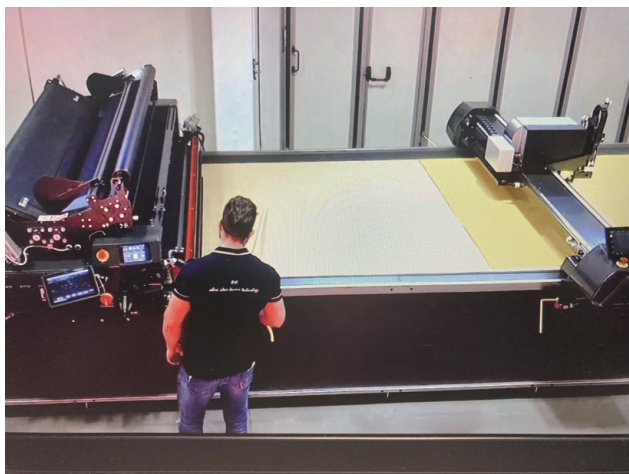
ting plan to minimize efforts in terms of markers to be made and layers to be cut. For each production order, several drawing and cutting batches are often created, at least one for each different material that makes up the garment.

At the end of processing, the CUTPLAN generates the request for markers with the ideal combination of sizes and colors, useful for producing the entire order of garments. At this point the MAXIMA CAD system comes into play to perform the marker of the patterns of the model and maximize the consumption of fabric. It uses extremely accurate and efficient nesting algorithms that allow you to obtain optimal results quickly and completely automatically.

The length of the markers produced in this way is returned to the CUT PLAN, which at this point is aware of the exact requirements and is able to allocate the cloth rolls and generate the spreading orders by placing them in the work queue of the SpreaderMX system. SpreaderMX starts by communicating to the Robot the list of cloth rolls that will be needed during the spreading; transmits the number of layers and their lengths to the spreader and constantly monitors the activity of the machine. It shows on the screen the marker associated with the spreading in progress and is able, in the presence of fabric defects, to automatically calculate which pieces of the marker are involved and provide the machine with the cutting and resumption points of the spreading.

At the end, it stores all the work data in a database and transmits the files for the respective processes to the labeling machine and the cutting machine. The labeller can operate indiscriminately with cutting files (ISO format) or print files for plotter (HPGL format). As the last element of the SCR we find the cutting machine. It is managed by an HMI (Human Machine Interface) application called Cutting Control Center which adjusts and controls the operation of the machine, allows you to set the working parameters and stores all the production data. As previously mentioned, the program receives in its work queue the cutting files from the spreading system (SpreaderMX) and other optional information from the CUT PLAN, useful for analyzing the results.

Over the last few years, the need to monitor, analyze and interact remotely with the SCR (Syncro Cutting



The scenes of the IMA Digital Event

Room) has become increasingly pressing, and in particular using different devices such as PCs, tablets, smartphones, etc. This need was met thanks to the use of a web-based application that exposes to the internet, but with the due degree of protection, all the working data of the machines, both previous and contextual.

IMA R&D and new products introduction

IMA has continued to invest in research and development with the aim of perfecting its products. The philosophy that inspires us is to satisfy the customer's needs. In this complicated period, IMA's research focused on improving our production range and introducing new

machines and software. Like any new IMA product, even those we introduce today represent an evolution and an innovative approach to solving problems in the Cutting Room.

With the new cad, MAXIMA cad, we have introduced a powerful modeling tool that allows you to optimize the modeling process. IMA has also designed a new machinery for the handling and management of the cloth rolls. We present the 812 CHRONOS robot to you today. This machine, modular in size and capacity, guarantees effective management of your fabric rolls. Completely automatic, it interfaces with the spreading line and guarantees a net improvement in productivity, thanks to the control of the roll raw material. To complement the offer, IMA proposes a new labeller, directly controlled by a PC. A new simple and intuitive user interface, the possibility of multilingual printing, the use of labels of different sizes are the strengths of this new product. The direct management of the files to be labeled on the machine also guarantees high flexibility together with high performance. The last piece of this new product range is the 921 Tempest Plus automatic cutting machine. The production performance of this new cutting machine makes it one of the best performing in its category. Now I present to you my colleague Giacomo Carbonari who will talk to you about MAXIMA cad software.

The followings are the details of each new products:



MAXIMA CAD

MAXIMA is the name we have chosen for our new suite of modeling programs. Today more than ever, every cutting room that aspires to maximum productivity needs to be supported by reliable software, which allows it to face every challenge, even the most complicated. In researching how to improve our product,

we decided to focus on the critical issues that were reported to us most by our customers. The result is a cad that guarantees:

- 1) Intuitive use
- 2) Integration into the production process

Intuitive use is guaranteed by shortcuts, automatic size development, macro functions that allow you to automate the process. These guarantee a considerable simplification in the learning phase of the new program, especially for operators who up to that moment have used different CADs. It also allows you to make the model design process very streamlined.

The integration of IMA products within the production process and the dialogue with machines from other manufacturers is an essential value for us and has been with us for over 40 years. With MAXIMA this possibility is guaranteed by Direct Importers of proprietary formats from the most popular cads (Lectra, Optitex and Gerber) and by the possibility of exporting files in all formats used. In addition to the 2D modeling CAD, the offer is completed by the Marker with automatic multicore nesting. The algorithm that calculates the optimal arrangement of the patterns guarantees maximum use of material while maintaining very low processing times. The Marker respects all constraints related to materials applied to the pieces such as directional rotation, skew margins and diffusion constraints to ensure quality and minimize the margin of error.



812 Chronos

812 Chronos machine is a cloth rolls management warehouse.

The dimensions can be customized in according to the number of rolls and their size. The warehouse can therefore be configured in length and height.

The machine is basically composed of three parts:

- Preloading and unloading station: takes care of managing the cloth rolls entering the warehouse. The loading or unloading phase can be carried out manually or by creating a list of rolls using the bar code, where the control system will then move the rolls automatically.
- Management warehouse: which is the actual warehouse, where the fabric rolls are allocated. The po-

sition of each roll can be chosen manually by the operator or automatically by the control system.

- Interfacing station with spreader or unrolling machine.

The movement of the rolls towards the spreader can take place in two ways: "Manual mode" where it is possible to establish the sequence of rolls to be loaded directly from the panel, again manually or by barcode; "Automatic mode": where the machine receives the sequence of rolls to be loaded on the spreader. The strength of the 812 Chronos machine consists in making the next cloth roll immediately available before it is finished the operation of unloading the previous piece. In this way the downtime of processing is reduced, increasing the productivity of the spreading and cutting line.



Polaris – labeling machine

Polaris, the latest IMA innovation in the field of automatic marker labeling. The Polaris labeller differs from the previous model thanks to a PC-based HMI that allows greater flexibility in operations. In the automatic section, the operator can choose and upload the file to be processed, he will also be provided with some tools to be able to modify the work in progress. The operator can in fact move the position of the labels and can, if necessary, change the content of the labels manually and in real time. You can also create and apply new labels manually.

The operator will have access to some operating settings of the machine such as the language. You can also check the operating status of the labeller at any time. The new labeller allows the printing of all languages such as chinese and russian, and the possibility of using labels of different sizes according to operational needs by setting the size directly on the machine. Polaris is equipped with new electronics management, thanks to the new servo drives on the digital bus it has been possible to significantly increase the precision and performance of the machine.

The latest novelty is the possibility to move the labeller on multiple cutting lines. The operator just has to move the machine into position, make sure that the translation table is released from the rest of the line and move the machine to the cutting line to be used. The translation table does not affect the work area of the spreading line, in fact it is also possible to spread on the translation table without wasting space and time.



Tempest Plus: automatic cutting machine

Tempest PLUS 921 automatic cutting machine with a useful cutting height of 3 cm. Tempest PLUS 921 has an average consumption of only 6 kW / h with a maximum speed of 100 meters / min and a maximum acceleration of 10 mt / s². Being equipped with inverters on all users, eco-friendly management of each motorization is ensured. These performances are obtained thanks to the use of the EtherCAT communication protocol, for a high-speed exchange of information and calculation precision without margins of errors.

The use of a high-frequency communication digital bus minimizes the response cycle time of all parameters, such as axes, inverters, remote peripherals, maximizing machine performance. Tempest PLUS 921, like all the automatic cutters we produce, uses the Cutting Optimizer software for processing iso files. The latest version, in addition to ensuring the harmonization of the cutting path, the optimization of the movements between the shapes, the management of common lines, allows the processing of ZERO GAP markers.

Thanks to the introduction of the new cutting preview, it is possible to carry out checks and make changes using a simulation process, which allows you to follow the cutting code point by point and each execution movement. Entirely digital, it is possible to control every operation comfortably from the PC on the machine; work queues, production reports, diagnostics, user management and alarm management as well as the management of the differentiated pressure of the users most involved in the cutting process, through the use of proportional pneumatic valves. New completely redesigned cutting head with a high efficiency pneumatic drill on board.

A convenient touch screen display on the machine allows you to perform all the main operations, with greater ease of intervention, without moving to the general computer. Belt axes with brushless motors are used to move the Tempest PLUS 921 cutting head. Among the most important innovations we find the gantry management of the cutting bridge movement. Tempest PLUS 921: a unique REAL-TIME system. With Tempest Plus we conclude our presentation of the new IMA products and I hope to have transmitted to you our passion, which has never faded even in a difficult period.

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