



Press Office Manager CRP Group

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Parrot develops final Bebop 2 version

Parrot has developed the final Bebop 2 version with the help of Windform GT material. Parrot Bebop 2 combines robustness and reliability in a lightweight and



compact drone. The body, built with Selective Laser Sintering technique, combines excellent aesthetic results in excellent resistance to impact and temperature changes. Reinforced composite materials that were used in the construction of on-car and wind tunnel parts and components for racing teams have taken the technology of 3D Printing to new heights to produce parts for the entertainment industry and consumers.

The first Bebop 2 structure was built on injected parts made with polyamide based glass reinforced composite material. Then Parrot moved to SLS (Selective Laser Sintering) technology in collaboration with CRP Technology in order to optimize the structure performance without developing long lead time and high cost injection tooling, accelerate iteration generation, improve manufacturing time, facilitate production in series.

The Bebop 2 parts in Windform GT are the main structure (central body) and all single arms. Parrot validated that natural frequencies of parts manufactured with Windform GT material were similar to injected parts with polyamide based glass reinforced composite material. Windform GT proved to be the only material for 3D Printing technologies that was able to overcome the accidental fall of tests carried out by Parrot's technicians.

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Come to Logan and Explore the Next Generation of Space Applications with CRP USA

CRP USA will be attending the Small Satellite Conference and Exhibit at Utah State University from August 8th to August 11th. The event will be held at the Taggart Student Center, and CRP USA will be exhibiting at booth 44T.

CRP USA will be displaying **cutting edge solutions** for the space industry manufactured in the **WINDFORM family of materials**. CRP USA works alongside key space industry leaders and their staff is ready to welcome SmallSat attendees.

Based in Mooresville, North Carolina, **CRP USA** employs a highly skilled staff that specializes in the manufacturing and creation of end-use parts and prototypes built from WINDFORM.



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3D Printing Industry



CRP USA will demonstrate latest aerospace solutions at August conference

Based in Mooresville, North Carolina, [CRP USA](#) specializes in the manufacturing and creation of end-use parts and prototypes built from WINDFORM. From August 6th to August 11th the company will be attending the Small Satellite Conference and Exhibit at Utah State University, which will be held at the Taggart Student Center. CRP USA will be exhibiting at booth 44T, displaying [cutting edge solutions](#) for the space industry manufactured in the WINDFORM family of materials.

At the exhibit, CRP USA plan to demonstrate the following:

- use of WINDFORM composite materials, originally developed for the motorsports industry, is now finding many uses in space exploration
- effectiveness of additive manufacturing and use of WINDFORM as a structural material for space applications.

About Small Satellite Conference

For 30 years, the Small Satellite Conference has been a place where innovators, engineers, problem solvers, scientists, entrepreneurs, and dreamers alike come together to tackle challenges and push the boundaries of space exploration. Each year, Small Satellite Conference attendees share their successes and lessons learned, demonstrate their capabilities, network, and mentor for the next generation. These crucial interactions have inspired and ignited imaginations, paving the way for small satellites to perform missions that few thought possible.

The 30th Annual Small Satellite Conference will celebrate the industry's tremendous achievements, while continuing to inspire ingenuity for future military, civilian, and commercial space missions.

About CRP USA

CRP USA is devoted to the American market of stockcar racing, additive manufacturing and 3D Printing WINDFORM materials. A staff of specialists at CRP USA study and draw up plans for the world of American motorsports, space, entertainment, defense, design, automotive and UAV.

CRP USA is partnered with the CRP Group, an Italian based company dealing in the motorsports industry and other high-performing sectors.

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IL GIORNALE ON LINE DI CONFINDUSTRIA MODENA

Agosto da protagonista per Crp Usa

Il braccio operativo del gruppo modenese negli States parteciperà a due importanti eventi di settore



Crp usa non chiude i battenti ad agosto. Dal 6 all'11 agosto parteciperà allo **Small Satellite Conference a Logan (Ut)**, e dal 22 al 24 agosto sarà tra i protagonisti dell'**Asme's Additive Manufacturing+3D Printing Conference&Expo (Am3d)** di Charlotte (Nc).

Giunto al **ragguardevole traguardo dei 30 anni** lo Small Satellite Conference and Exhibit, il salone dedicato ai microsatelliti della Utah State University, fin dalla prima edizione si è distinto per accogliere tutti coloro che credono nelle potenzialità illimitate dei piccoli satelliti.

Crp Usa non poteva mancare a questo **importante appuntamento: dal 6 all'11 agosto** esporrà infatti, nello stand 44T del Taggart Student Center di Logan, le più recenti applicazioni realizzate in ambito aerospaziale a dimostrazione dell'efficacia della stampa tridimensionale con i materiali Windform. L'impiego della tecnologia additiva e della stampa 3D sta divenendo sempre più importante anche in questo settore.

Con sede a Mooresville, nel North Carolina, Crp Usa può avvalersi di uno staff altamente specializzato nella produzione e realizzazione di parti finali e prototipi costruiti in Windform. Crp Usa da diversi anni lavora come partner tecnologico di aziende e istituti

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Crp Group protagonista dell'estate americana

Si preannuncia un agosto denso di attività per **CRP Usa**, consociata americana del Gruppo CRP di Modena.

Dal 6 all'11 agosto parteciperà allo **Small Satellite Conference** di Logan (Utah), mentre dal 22 al 24 agosto sarà tra i protagonisti dell'**Asme Additive Manufacturing + 3D Printing Conference & Expo (AM3D)** di Charlotte (North Carolina).

La prima manifestazione è giunta al ragguardevole traguardo dei 30 anni. Si tratta di un salone dedicato ai microsattelliti della Utah State University, che fin dalla prima edizione si è distinto per accogliere tutti coloro che credono nelle potenzialità illimitate dei piccoli satelliti.



CRP USA testimonierà come l'impiego della tecnologia additiva e della stampa 3D sta divenendo sempre più importante anche in questo settore.

Esorrà nello stand 44T del Taggart Student Center di Logan, le più recenti applicazioni realizzate in ambito aerospaziale a dimostrazione dell'efficacia del **3D printing** con i materiali **Windform**.

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Microfabricator



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Posted: 6 days ago on <http://3dprintingindustry.com>

REPORT

SHOW ORIGINAL

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Satmagazine



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The Bebop 2 "Leisure Drone" + Additive Manufacturing

By Matteo Levoni Bemposti, Engineer, Head of Reverse Engineering, CRP Technology

Parrot's Bebop 2 is a prime example of how professional 3D printing and Windform materials helped in the construction of this first "leisure drone."



The body of this drone was built using Selective Laser Sintering techniques in combination with innovative Windform GT Additive Manufacturing material, which combined excellent aesthetic results with excellent resistance to impact and temperature changes. Reinforced composite materials for use by auto racing teams have taken the technology of 3D Printing to new heights, now producing parts for the entertainment industry and for consumers. This article describes the construction of the first leisure drone, Bebop 2, using these manufacturing techniques.

A Lightweight + Compact Drone.

With impressive stability and maneuverability—even in extreme conditions—Bebop 2 offers easy-to-use craft piloting with little learning required of the user (pilot). Data collected by the Bebop 2's seven sensors is analyzed and processed quickly, thanks to the impressive calculation capability of the craft's onboard computer.

A specifically designed, front facing camera is integrated into the BeBop2. A pilot can digitally alter the angle of the camera by 180 degrees simply by sliding a finger across the screen of the piloting device. Digitally stabilized on three axis, thanks to powerful algorithms, images are bright, perfectly stable and without distortion, regardless of the drone's movements.

Parrot developed the final Bebop 2 version with the help of Windform GT material. The first Bebop 2 structure was built on injected parts that were constructed with polyamide-based, glass reinforced composite material. Parrot then moved to Selective Laser Sintering (SLS) technology in collaboration with CRP Technology. This move was made to optimize structure performance that did not require a long lead time and to also avoid high cost injection tooling. Also acquired was the ability to accelerate unit iteration generation, improve manufacturing time and to facilitate series production.



The Bebop 2 parts in Windform GT are the main structure (central body) and all single arms. The body is robust and flexible and the arms are reinforced. Parrot carried out an original development approach that was based on experimental analysis and FE modeling, both aimed at improving the quality of captured video during flight (which is usually altered by drone vibration) through drone design optimization. The unit's structure was also implemented through smart design to reduce overall weight.

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