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THE BUSINESS **EATURE** .....

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PRODUCTIVITY MATTERS

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INDUSTRY ALLIANCE





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## The Mill International Aspiration and Journey



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n 2016, a s1/cond1/d S  $VT1/ch_1/c1/d_cch1//h1/p1/d$  to 1//pand th1// an 1/of applications of th1/S VT1/ch-d1/1/op1/d  $VatCalo_i1/^m$ , automat1// th1// 1/ti\_1// m1/su\_1/h1/rt p\_oc1/s, and add on indust\_y 4.0 capability to monito\_ th1/syst1/n h1/d1th fo\_ optimal p1/fo\_manc1//

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M Robe H. ang, CEO, Wa eleng h Op o-Elec onic (WOE) Singapo e

Note: The T-Up initiative, a multi-agency e ort by A\*STAR, the Economic Development Board, SPRING Singapore (now Enterprise Singapore), IE Singapore (now Enterprise Singapore), and the Infocomm Development Authority (now Media Development Authority), involves seconding RSEs to local enterprises to access the pool of R&D talent in Research Institutes.

For more information, please contact **Dr Kok Shaw Wei** at swkok@SIMTech.a-star.edu.sg

lasmot1/th t1/4d, a sin<sup>9</sup> apo\_1/an manufactu\_1/ of plastic compon1/1ts, 1/1ba, 1/4 on th1// p1/ations and T1/2hnolo<sup>9</sup> y . To admappin<sup>9</sup> (T.A. jou\_n1// in Nov1/hb1// 2015 to plan th1// st\_at1//y and innovat1// on th1// busin1//s mod1// At that tim1//th1// focus // as on supplyin<sup>9</sup> conn1/2to, s to th1/1/1/2t\_onics indust\_y // hich // as facin<sup>9</sup> majo\_1/2/onomic h1/2d// inds.

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M Chong Boo Yeong, Managing Di ec o Pla mo ech P e L d

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## MANUFACTURING MATTERS J. I 2018



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Lo 1/ than 70 pa ticipants f om th1/ las1/s and optics indust y, acad1/hia, and ov1/hm1/ht a 1/hci1/ att1/hd1/d th1/loint ndust y 51/to, lannin (J S) Poundtabi1/ o anis1/d by A\*STA A th1/ conomic D1/11/opm1/ht oa\_d (D), and nt1/p\_is1/Sin apo\_1/(S) on 11 Vay 2018. a ticipants conv1/21/d to 11/d\_n about advanc1/h1/hts in \_1/1/d\_ch and d1/11/opm1/ht (AD) in this fi1/d, and to b\_ainsto\_m on oppo\_tuniti1/d fo\_ th1/local indust\_y.

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associations and chamb1/s to study and 1/plo\_1/9\_of th oppo\_tuniti1/s fo\_th1/ local p\_1/sision 1/p9 in11//in9 indust\_y. as1/s and ptics is on1/such indust\_y sub-s1/to\_. Apa\_t f\_om its ma\_1/ p\_oj1/t1/d 9\_of th at a compound annual \_at1/of 8 p1/ c1/ht, las1/s and optics t1/thnolo9 i1/s a\_1/also 1/hablin9 n1/w applications and 9\_of th in oth1/



D Ahmad Magad, G o. p Managing Di ec o , II-VI Singapo e P e L d

indust\_ity. ampl1% a\_1/as1/ann1/lin<sup>9</sup> in th1/fab\_ication of flat pan1/displays, d11/d ult\_a-viol1/ las1/s in fab\_icatin<sup>9</sup> 1/1 small1/f1/tu\_1/ in s1/niconducto, manufactu\_in<sup>9</sup>, and th1/ubiquity of s1/lso\_s in consum1/11/dt\_onics and automotiv1/such as li<sup>9</sup> ht d1/1/dtion and \_an<sup>9</sup> in<sup>9</sup> (-iD<sup>A</sup>/9 syst1/ns.

Th1/ oundtabl1/ o. anis1/d into fou pa\_all1/ b\_1/d -out t\_ac s, 1/plo\_1/d oppo\_tunit1/d and aps \_1/1/ant to th1/1/ applications. las1/s, optics in s1/niconducto\_ manufactu\_in<sup>3</sup>, optics in lif1/ sci1/1/t tools, and optics in consum1/ 1/1/t\_onics and automotiv1/ Th1/ b\_ainsto\_min<sup>3</sup> and discussion V as facilitat1/d by th1/ p1/ations & T1/chnolo<sup>9</sup> y. Oadmap (T\_AT1/dm usin<sup>3</sup> 5 //T1/ch's T\_Am1/thodolo<sup>9</sup> y.

subs14414t Vo, shop Vill b1/ h1/d Vith th1/ 14/4, ch community to id1/11/g pot1/11/al capabiliti1/ d1/11/opm1/1t initiativ1/s and 4%D p.o., amm1/s to add 1/s th1/chall1/9 1/ and oppo, tuniti1/s id1/11/fi1/d at th1/ oundtab11/and to compl1/11/th1/as1/s & ptics T1/chnology Abadmap. Th1/ o, anis1/s a, 1/also planning a s1/nina, in th1/s1/cond half of th1//14, to sha, 1/th1/ compl1/11/d -as1/s & ptics T1/chnology Abadmap Vith pa, ticipating companify.

For more information, please contact: **Dr Yong Ming Shyan**, **John** at msyong@SIMTech.a-star.edu.sg



# Techni . e can be. ed on me al . face and mo. Idable pol me

Anti-count1/flitin<sup>®</sup> p\_ot1/ts both int1/1/tual p\_op1/ty and manufactu\_in<sup>®</sup> o\_i<sup>®</sup> inality. As an 1/fl/tiv1/ anticount1/f1/tin<sup>®</sup> m1/hod, mic\_o ima<sup>®</sup> 1/ has b1/1/ Vid11/ us1/d fo\_ s1/1/dal d1/dd1/v on mon1/, pap1/ and plastic pac a<sup>®</sup> 1/.

Diamond  $Mc_o$  n<sup>9</sup> avin<sup>9</sup> (D V) is a nov1//machinin<sup>9</sup> t1//hniqu1/d1/11/op1/d by § VT1//h to 91/11/at1/9 ayscal1/ mic\_o ima<sup>9</sup>1/9 on m1/fal moulds o, ins1/ts. y 1//nployin<sup>9</sup> D V, a 9 iv1/f 9 ayscal1/ima<sup>9</sup>1/9 ith 11/fh1/ la.9 11/0, small ima<sup>9</sup>1/9 siz1/9 can b1/9 machin1/d on a m1/fal su fac1/9 achi1/9 in<sup>9</sup> h 11/0<sup>9</sup> nisability, d1/nonst\_atin<sup>9</sup> this tlyhnolo<sup>9</sup>y's fl1Vibility to b1/us14 fo, anti-count1/f1itin<sup>9</sup> o, oth1/ d1/o, ativ1/ and b, and-1/c<sup>9</sup> nition pu, pos14. This t1/hniqu1/can also b1/us14 fo, fab, ication of mould fo, s1/conda, y 10/lication of such f14tu, 14 fo, anticount1/f1itin<sup>9</sup> o, oth1/ d1/o, ativ1/ and b, and-1/c<sup>9</sup> nition on mouldab11/ mat1/ials li 11/polym1/s.

Fo, anti-count1/f1/itin<sup>9</sup> application, it is difficult to duplicat1) an id1/itical ima<sup>9</sup> 1/ on a m1/al su, fac1//ithout havin<sup>9</sup> th1/ o, <sup>19</sup> inal ima<sup>9</sup> 1/sou, c1/ and th1//1/act sp1/cific p\_oc1/s conditions. How 1//1/ this is possib1//th\_ou<sup>9</sup> h th1/5 //T1/chd1//1/op1/d t1//hniqu1/as th1/mic\_o c1//,



Scalin<sup>9</sup> do∉n of th1µmachin1µ1 9 ayscal1µma9 1¢ on m1∦al su fac1¢



V hich is th1/constitutivit pi 1% can b1/ 1/9 avter by a shap diamond tool using a multi-a is ult\_a-p\_1/cision machining syst1m. This t1/chniqu1/is capabl1/of conv1/ting any giv1m gayscal1/imag1/ to a pi 11/atta\_a, ay of customis1/2 mic\_o f1/atu\_1%. Th1/d1/ail1/d gayn1%s can b1/ p\_1/cis1/2 cont\_oll1/d by manipulating th1/pi 1/f1/atu\_1/siz1/2

Itid IV th IV uniqu IV cutting st\_at IV y and Imgin IV/ing now-how on mic\_o Imgaving, this t IV/hnology also includ IV a customis IV softwa\_IV to convIV th IV pi IVat IV imaginary IV to complete machining. To IVab IV/such convIV/sion of a squa\_IV imaginary to an a\_ay of mic\_o/nano f IV to an a\_ay of mic\_o/nano f IV to a a a\_ay of mic\_o/nano

For more information, please contact **Dr Zhang XinQuan**, Machining Technology Group at zhangxq@SIMTech.a-star.edu.sg



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Collabo a i e Ind. Pojec (CIP), ini ia i e , pog amme and ead - o-go echnologie a e a ailable o a i i ind.



Th1 / 14 / t1/hnolo y utilis1/ hi<sup>9</sup> h 1/1 / y las1/ b1/dm fo, mat1/ial d1/position / hich 1/abl1/ 3D additiv1/manufactu, in<sup>9</sup>, su\_fac1/modification and 1/pai, / ith hi<sup>9</sup> h f11/ibility to achi1/1/ 9 ood m1//hanical p.op1//ti1/, / 1/a, and co\_osion \_1/sistanc1/

For enquiries, please contact **Mr Tan Lye King** at tanlk@SIMTech.a-star.edu.sg

## the the the the the

Functional coatin<sup>9</sup> s p\_ovid14dditional functions apa,t f\_om th14 p\_ot14tiv14and d14o\_ativ14us14. lass and c14amics a\_14us14 to assist compani14 in d1414opin<sup>9</sup> functional coatin<sup>9</sup> s fo\_ va\_ious functional pu\_pos14.

For enquiries, please contact **Mr Goh Chee Chien** at gohcc@SIMTech.a-star.edu.sg

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For enquiries, please contact **Mr Tan Chee Tat** at cttan@SIMTech.a-star.edu.sg

## a go a frage and hap and a set

<sup>4</sup> tool to h14 ass14s 14 uipm14t's 1414<sup>9</sup> y usa<sup>9</sup> 14 n "141-tim14 and id14 tify hotspots of 14 c14 siv144 14<sup>9</sup> y usa<sup>9</sup> 14 hotspots.

For enquiries, please contact **Mr Joshua Thong** at cmthong@SIMTech.a-star.edu.sg

A planning and t\_ac ing solution to imp\_ov1/ th1/ manag1/h1/ht of d\_iv1/s/v1//icl1/g to 1/f1/gtiv1// m1/h/ custom1/ impos1/g pic -up and d1//v1/y \_1/gui\_1/h1/hts amidst\_1/gou\_c1/const\_aints.

For enquiries, please contact **Mr Chai Lai Sing** at lschai@SIMTech.a-star.edu.sg

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<sup>4</sup> "14I-tim1/dashboa, d that is customis1/d to suit th1/company n1/4/s and to conn1/d to multip11/sou, c1/d fo, con<sup>9</sup>, 1/d ation and analysis of "1/dI-tim1/data.

For enquiries, please contact **Mr Chai Lai Sing** at lschai@SIMTech.a-star.edu.sg



This tool it 1/1abl1/2 food manufactu\_in<sup>9</sup> companil/2 to do \_1/21-tim1/2, ac in<sup>9</sup> of food  $\forall$  ast1/2 auto al1/2 t of p\_oc1/25 in1/fici1/2/ci1/2, hot spot id1/2/tifications and automat1/2 food  $\forall$  ast1/2/1/2



Join us at <sup>A</sup> VF'18 to Illa n and undlystand how innovations 1/n1/2 1/9 ain adoption and t\_action in th1/indust\_y. n its13th 1/dition, <sup>A</sup> VF'18 f1/atu\_1/2 a\_tn1/ship fo\_ mpact //ith ou\_indust\_y pa\_tn1/s sha\_in9 on th1/2 busin1/s jou\_n1/ and how //o\_ in9 //ith 5 VTl/2h has h1/p1/2 th1/h to d\_iv1/busin1/s innovation and 9 ain a 9 lobal comp1//itiv1/advanta91/by b1/h \_ 1/1/ant in today's t1/2h holo9 y-d\_iv1/1 1/1/vi\_onm1//t.

For enquiries, please contact Ms Nadia Chandra Sekar at sekarn@SIMTech.a-star.edu.sg

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