

Online quoting services

Overview of the current practices

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Agenda

- / Look at useful features (best practices) implemented by competitors
- / Offer recommendations for each example/feature
- / Outline critical success factors for an online quoting site

Services evaluated

- / OnSite
- / Alphaprototypes
- / Quickparts
- / First Cut
- / RPDG
- / Redeye Express
- / Redeye OnDemand
- / Solidconcepts
- / Stereolithography
- / DPT
- / Mydea
- / 3D ProParts
- / ZoomRP
- / others...

No registration required

- / Alphaprototypes: no personal information is required to start the quoting process and only email/phone required to see the price quote
- / Mydea: no personal information (or even STL file!) is required to see the quote. Great for customers with confidential projects.



More about registration

- / Most SB's require registration before giving out a quote. Registration before showing price is bad.
- / **Recommendation:**
 - Allow the customer to start the quoting process without registration.
 - Don't put unnecessary obstacles in customer's way when the customer just wants to see the price. Ask only for name/contact information and only if you really have to.
 - Prompt customers to create an account when it's logical to do so from their point of view, for example:
 - *when placing an order,*
 - *when saving a quote,*
 - *when asking for a manual/offline quote.*

Upload or analyze?

- / Competition: 2/3 upload, 1/3 analyze
- / Typical analyze case: install a plugin (i.e. OnSite)
- / Worst analyze case: 3D ProParts required Java, which took a while to download and install
- / Typical upload case: ask user to select all files and make the user wait for the upload to complete before continuing
- / Best upload case: SolidConcepts uploaded parts “in the background” allowing the user to specify parameters while the part was uploading
- / **Recommendation:** give users the option; upload/analyze in the background

To zip or not to zip

- / 1/3 of the SBs accept zipped files for instant quoting
- / Over half accept zips for offline quoting
- / Only 3DProParts can unzip and analyze files on the clients side
- / **Recommendation:** accept zipped files, especially if quoting is done on the server side

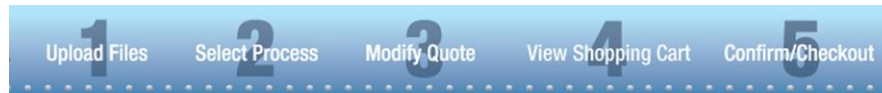
Quoting and ordering process

/ A linear, multi-step quoting and ordering process:

OnSite:



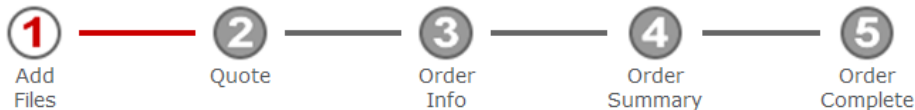
Quickparts:



Alpharpototypes:



Redeye:



ZoomRP:



/ **Recommendation:** do the same

How many steps to quote?

/ Most SBs feature a 2-step process:

- Step 1: select files
- Step 2: set parameters

/ Advantages:

- clear sequence of steps is helpful for new users

/ Disadvantages:

- if quoting is based on uploading files, user has to wait for files to upload, before being able to set file parameters
- adding parts requires navigating back to step one

SolidConcepts 1-step quoting

/ Single-screen solution:

PART STYLE CONFIGURATION

Specify a style... Reset

1 Product ?

2 Material ?

3 Hand Finish ?

4 Surface Treatment ?

Save Current Style

Or select a saved style...

★ Saved Style Delete

Selected Saved Style Details

Product PolyJet

Material SC White

Hand Finish None (Unfinished)

Surface Treatment None

APPLY STYLE
(to all parts selected below)

ADD PART

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Select [ALL] [NONE]							
ITEM NO.	✓		PART NAME Dimensions (X x Y x Z)	PRODUCT DESCRIPTION	QTY	UNIT PRICE	EXTENDED PRICE
1	<input type="checkbox"/>		electrode_democavity.stl (130.0 x 130.0 x 41.5) mm Special Requirements	<input checked="" type="radio"/> Product: PolyJet • Material: SC White • Hand Finish: None (Unfinished) • Surface Treatment: None	<input type="text" value="1"/>	\$1,202.00	\$1,202.00
2	<input type="checkbox"/>		Chassis.stl (0.0 x 0.0 x 0.0) Special Requirements	<input checked="" type="radio"/> Uploading...	<input type="text" value="0"/>	\$0.00	\$0.00
3	<input type="checkbox"/>		angel.stl (0.0 x 0.0 x 0.0) Special Requirements	<input checked="" type="radio"/> Upload queued.	<input type="text" value="0"/>	\$0.00	\$0.00
4	<input type="checkbox"/>		gearhousing_mod.stl (0.0 x 0.0 x 0.0) Special Requirements	<input checked="" type="radio"/> Upload queued.	<input type="text" value="0"/>	\$0.00	\$0.00
						Subtotal	

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SolidConcepts 1-step quoting

/ Benefits:

- user can specify part parameters while the part files are uploading
- easy to add additional files to the quote: no need to go back and forth between the file selection and parameter selection screens;
- can even add parts while other parts are uploading

/ Recommendation:

- Go for the 1-step process

One part, multiple scenarios

- / **Recommendation:** allow users to easily play “what-if” scenarios with processes, materials, and finishes for the same part by:
 - *acceptable*: indicating how much more or less money each option is in the list of options for each parameter (Mydea) OR
 - *good*: updating the price very quickly every time a parameter is changed (Stereolithography) OR
 - *better*: duplicating a part (SolidConcepts) OR
 - *best*: allow to add a parameter set to an existing part + indicate how much more/less money each parameter costs + update the price very quickly;
 - *this approach is likely to fit most users’ mental model of how this type of feature should work*

1. Mydea

/ Borrowed from build-to-order PC manufacturers:

finishing	help me to choose
<input checked="" type="radio"/> no finishing [free of charge]	
<input type="radio"/> smooth-sanded +\$98.58 per part	
<input type="radio"/> polished +\$157.72 per part	

2. Stereolithography: the AJAX way

- / Changing a parameter value updates everything without a page refresh:

Service	SLA	Sub Total:	
Material	Nylon	Multi-Part Discount:	
Finish	Class 1A	Coupon Discount:	
Ship Method	FedEx Priority Overnight®	Freight:	
Coupon Code		Total:	

< 1 second

Service	SLA	Sub Total:	\$1,313.31
Material	Best	Multi-Part Discount:	-\$262.66
Finish	Class 2A	Coupon Discount:	-\$0.00
Ship Method	FedEx Priority Overnight®	Freight:	\$91.84
Coupon Code		Total:	\$1,142.49

3. SolidConcepts: copy the part

Select [ALL] [NONE]

ITEM NO.	<input checked="" type="checkbox"/>		PART NAME Dimensions (X x Y x Z)	PRODUCT DESCRIPTION	QTY	UNIT PRICE	EXTENDED PRICE
1	<input type="checkbox"/>		Chassis.stl (103.5 x 123.3 x 149.0) mm Special Requirements	<input checked="" type="checkbox"/> Product: SLA Standard <ul style="list-style-type: none"> Material: SC 4500 Hand Finish: Inside and Out Surface Treatment: None 	<input type="text" value="1"/>	\$781.00	\$781.00
Subtotal							\$781.00

Select [ALL] [NONE]

Copy the selected parts



Select [ALL] [NONE]






ITEM NO.	<input checked="" type="checkbox"/>		PART NAME Dimensions (X x Y x Z)	PRODUCT DESCRIPTION	QTY	UNIT PRICE	EXTENDED PRICE
1	<input type="checkbox"/>		Chassis.stl (103.5 x 123.3 x 149.0) mm Special Requirements	<input checked="" type="checkbox"/> Product: SLA Standard <ul style="list-style-type: none"> Material: SC 4500 Hand Finish: None (Unfinished) Surface Treatment: None 	<input type="text" value="1"/>	\$359.00	\$359.00
2	<input type="checkbox"/>		Chassis.stl (103.5 x 123.3 x 149.0) mm Special Requirements	<input checked="" type="checkbox"/> Product: SLS Standard <ul style="list-style-type: none"> Material: Nylon 12 AF Hand Finish: None (Unfinished) Surface Treatment: None 	<input type="text" value="1"/>	\$545.00	\$545.00
Subtotal							\$904.00

Select [ALL] [NONE]

4. Adding parameter sets


1. Files **2. Quote** 3. Address 4. Billing 5. Confirm order

Set Parameters


Technology / material:	Finish	Quantity	Unit price	Total price
 blue_gear.stl SLS - Polyamide <input type="text" value="Normal"/> SLS - Polyamide <input type="text" value="Normal"/> SLA - Poly1500 <input type="text" value="Normal"/> <input type="button" value="+ add parameter set"/>	Normal	1 <input type="button" value="x remove"/>	\$ 275.00	\$ 275.00
	Normal	4 <input type="button" value="x remove"/>	\$ 185.00	\$ 740.00
	Normal	1 <input type="button" value="x remove"/>	\$ 240.00	\$ 240.00
	<hr/>			
 yellow_gear.stl SLS - Polyamide <input type="text" value="Normal"/> SLS - Poly1500 <input type="text" value="Normal"/> <input type="button" value="+ add parameter set"/>	Normal	1 <input type="button" value="x remove"/>	\$ 190.00	\$ 190.00
	Normal	1 <input type="button" value="x remove"/>	 loading...	 loading...
	<input type="text" value="None - \$45.00"/> <input type="text" value="Normal"/> <input type="text" value="Outside + \$59.00"/> <input type="text" value="In and out + \$109.00"/>			
 red_gear.stl SLS - Polyamide <input type="text" value="Normal"/> <input type="button" value="+ add parameter set"/>	Normal	2 <input type="button" value="x remove part"/>	\$ 310.00	\$ 620.00


Estimated lead time for all parts:  loading...

[Shipping option:](#)

Order subtotal:  loading...

Ground (5-11 days) \$ 24.50

Online discount:  loading...

Order total:  loading...

QuickParts: lead time vs. price matrix

- / Calendar price matrix: user can select the best combination of price and lead time.

SHIP DATE (Pick the date for shipment of parts)

Aug (10) - Sep (10)						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
8	9	10	11	12	13	14
15	16	17	18	19	20	21
		\$1111 ●	\$803 ●	\$781 ●	\$759 ●	
22	23	24	25	26	27	28
	\$737 ●	\$715 ●	\$694 ●	\$672 ●	\$650 ●	
29	30	31	1	2	3	4
	\$628 ●	\$606 ●	\$585 ●			

Merchandising







/ Upselling in the “shopping cart” at DPT:

PARTS IN YOUR PROJECT Add Parts

Part Info	Process	Material	Finish	Qty	Price
<input type="checkbox"/> <input type="checkbox"/> gearhousing_mod.stl 136.02 mm x 64.56 mm x 30.00 mm Volume: 38,592.27 mm ³  Additional Part Options - View This Part - View Quantity Discounts - Change Units - Remove From Quote	SELECT PROCESS <input checked="" type="radio"/> SLA <input type="radio"/> PolyJet <input type="radio"/> QuickCast Pattern <input type="radio"/> SLS <input type="radio"/> FDM <input type="radio"/> Urethane Casting <input type="radio"/> Investment Casting <input type="radio"/> Metal Casting <input type="radio"/> Sheet Metal	SELECT MATERIAL <input checked="" type="radio"/> 9120 - Flexible <input type="radio"/> 11122XC - Watershed <input type="radio"/> 12120 - High Heat <input type="radio"/> 18420 - ABS Like <input type="radio"/> DMX-SL 100 High Impact	SELECT FINISH <input checked="" type="radio"/> Basic <input type="radio"/> Functional <input type="radio"/> Pattern/Functional <input type="radio"/> Pattern <input type="radio"/> Primed <input type="radio"/> Painted <input type="radio"/> Nickel Coated	UPDATE QUANTITY Select Quantity: 1 <input type="text"/> <div style="border: 1px solid gray; padding: 5px; display: inline-block;"> Add 1 More For \$116.40 </div>	\$211.80



Comparison shopping at Redeye Express

	<u>PRICE</u>	<u>SHIP</u> 	<u>PROCESS</u>	<u>COMPANY</u>	
SELECT ▶	\$348 Details	August 18		Alchemy Models Inc.	Using Zcorp 510 printer and a new powdering system, parts enjoy 600 dpi, enhanced surface finish, great accuracy, fine details. Overall quality rivals SLA process. Only provider offering full-color.
SELECT ▶	\$410 Details	August 18		RedEye Express	Quick prototypes using REAL ABS thermoplastic. Ideal for concept modeling, design verification, marketing tools, form, fit, function and snap-fits. Ensure your product is ready for market.
SELECT ▶	\$754 Details	August 18		RedEye Express	Build quick concept models and prototypes. Superior feature detail and ultra-smooth surface finish with build layers of 0.0006 inch!
SELECT ▶	\$442 - \$463 Details	August 19		Vista Technologies	Well equipped with large platform machines and a Viper machine with a high resolution laser for small parts with tight tolerances. Vista offers multiple SLA resins from clear, flexible, and ABS-like.
SELECT ▶	\$545 - \$727 Details	August 19		Vista Technologies	VistaTek is one of the few service bureaus in the nation with the Objet Connex500. This machine makes it possible to do overmolding, living-hinged parts, and hard and soft durometers in the same run.

Live chat

/ Advantage: lower threshold of making contact

STEP 3. - REVIEW QUOTE

Below you may review your quote. At anytime, you can change the technology, material and quantity and receive an instant, updated quote for the same file.

PART INFO	OPTIONS	PRICE
<p>Chassis.stl 103.50mm x 123.30mm x 149.00mm Volume: 205313.81mm³ Area 171675.45mm²</p> <p>Change Units Remove Part</p> <p><input type="checkbox"/> Build As Sent</p>	<p>TECHNOLOGY Sintering (SLS®) ▼</p> <p>FINISH Unfinished SLS ▼</p> <p>MATERIAL Durable Nylon (DuraForm® EX) ▼</p> <p>COLOR Natural ▼</p> <p>STYLE QUANTITY</p>	<p>See Below</p>
<p>gearhousing_mod.stl 64.56mm x 136.02mm x 30.00mm Volume: 38592.35mm³ Area 31590.38mm²</p> <p>Change Units Remove Part</p> <p><input type="checkbox"/> Build As Sent</p>	<p>TOTAL</p>	

STEP 4. - SAVE QUOTE

Help Center

Remove Part

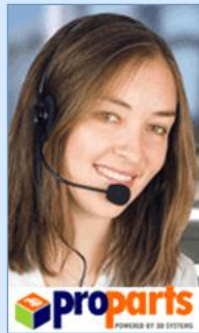
Click on this link to remove the individual part quotation from the quote. The quote totals will be updated to reflect the item's removal.

https://server2.clickandchat.com/?domain=www.3dparts.com&AspxAutoDe...

Welcome to Live Chat

Please enter your name and click the **Start Chat** button to begin.

Please Enter Your Name:



proparts
POWERED BY 3D SYSTEMS

Account summary

/ Account “home” at SolidConcepts:

Account Activities



RapidQuote™
Create an RFQ with our
automated system.

Most recent RFQs

RFQID	RFQ Name	RFQ Status	Created	Modified	Actions
102587	RFQ - 102587	Quoted	08/18/2010	08/18/2010	

Most recent Quotes

RFQID	RFQ Name	Quote Number	Quote Status	Quoted On	Actions
102587	RFQ - 102587	2003968	Open	08/18/2010	

Most recent Orders

RFQID	RFQ Name	Quote Number	Order Number	Ordered On	Actions
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Best of the bunch: SolidConcepts

- / Can instant-quote file formats other than STL
- / Can auto-fix and instant-quote bad STLs
- / Can duplicate a part, and by doing so allow user to:
 - create multiple-scenario quotes
 - order the same part in multiple finishes, materials, etc. in a single order
- / Can create parameter “styles” (technology/material + finish + paint options) and apply them to parts or save them to save time later
- / Can track orders placed online as well as offline

Best practices not practiced by anyone

- / “Lazy” registration: creating an account at the end of the checkout process
- / Material selection assistant
- / Accept “packed” builds (i.e. MGX files) from “advanced” customers
- / Allow customer to easily update the part line item in an existing quote with an updated STL file

Top success factors based on interviews

- / Integrate with production planning and CRM systems
- / allow users, both registered and unregistered, to easily view/modify recent quotes and turn them into orders

Top success factor based on competitive analysis

/ Be:

- as simple to use,
- accept as flexible an input,
- yet be as sophisticated behind the scenes as

the Google search box:

- accept any type of CAD file or measurements only (Mydea)
- packaged conveniently for the customer (individual files or zip archive)
- through any channel (Email, FTP, physical media, etc.)
- fixing the bad files automatically
- collecting as much info as the customer wants/can provide in the way that the customer wants to provide it (text comments and/or form fields)
- automatically suggesting alternatives
- automatically saving all user-entered info (i.e. last used parameter combinations, etc.) so that s/he doesn't have to re-enter it
- calculate the price based on the customer-submitted information using an accurate/sophisticated algorithm and display/save a price quote