

Internal Revenue Service
P.O. Box 2508 - Room 4525
Cincinnati, Ohio 45201

Department of the Treasury

Date: 6/16/11

Mach 30 Inc
C/o Joseph Simmons
5722 Craigmont Ct
Huber Heights, OH 45424-2606

Employer Identification Number:

27-0515679

Person to Contact - Group #:

Joy McCoy - 7828

ID# 0203121

Contact Telephone Numbers:

513-263-3095 Phone

513-263-4590 Fax

Response Due Date:

7/7/11

Dear Applicant:

We need more information before we can complete our consideration of your application for exemption. Please provide the information requested on the enclosure by the response due date shown above. Your response must be signed by an authorized person or an officer whose name is listed on your application. Also, the information you submit should be accompanied by the following declaration:

Under penalties of perjury, I declare that I have examined this information, including accompanying documents, and, to the best of my knowledge and belief, the information contains all the relevant facts relating to the request for the information, and such facts are true, correct, and complete.

To facilitate processing of your application, **please attach a copy of this letter to your response.** This will enable us to quickly and accurately associate the additional documents with your case file.

If we do not hear from you within that time, we will assume you no longer want us to consider your application for exemption and will close your case. As a result, the Internal Revenue Service will treat you as a taxable entity. If we receive the information after the response due date, we may ask you to send us a new application.

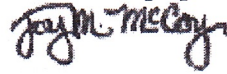
In addition, if you do not respond to the information request by the due date, we will conclude that you have not taken all reasonable steps to complete your application for exemption. Under Code section 7428(b)(2), you must show that you have taken all the reasonable steps to obtain your exemption letter under IRS procedures in a timely manner and exhausted your administrative remedies before you can pursue a declaratory judgment. Accordingly, if you fail to timely provide the information we need to enable us to act on your application, you may lose your rights to a declaratory judgment under Code section 7428.

If you have any questions, please contact the person whose name and telephone number are shown in the heading of this letter.

Letter 1312 (TEDS)

Page 2

Sincerely yours,

A handwritten signature in dark ink, appearing to read "Joy McCoy". The signature is written in a cursive, somewhat stylized script.

Joy McCoy

Exempt Organizations Specialist

Enclosure: Information Request

Additional Information Requested:

We have reviewed your organization's application for exempt status under section 501(c)(3) of the Internal Revenue Code of 1986, (hereafter "Code"), as amended, and found that additional information is needed to help determine whether you are tax exempt. To complete our consideration we need the following information over the signature of one of your principal officers or directors.

1. Read the Penalties of Perjury statement on page 1. Then, have an officer or director listed as such in the application sign and date below, indicating you agree to the Declaration. Return this page with your response.

Officer Signature	Officer Name & Title	Date
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2. Enclosed is a copy of your Articles of Incorporation and your Amended Articles of Incorporation secured from the website of the state in which you are incorporated. We have made it part of your file. Since we have provided a copy of this information to you, it is available for public inspection as part of your exemption application. Nothing further is necessary regarding this item.
3. The enclosed was printed off your website. This is just a courtesy to let you know that this information has been added to your administrative file as it is already public record.
4. To insure that your organization will serve public interests and not the personal or private interests of a few individuals, unrelated individuals selected from the community you will serve should control your Board of Directors. Members of the Board should be selected from the following categories; (1) community leaders, such as elected or appointed officials, members of the clergy, educators, civic leaders, or other such individuals representing a broad cross-section of the views and interests of your community, (2) individuals having special knowledge or expertise in your particular field or discipline in which your organization is operating, (3) public officials acting in their capacities as such, (4) individuals selected by public officials, and (5) individuals selected pursuant to your organizations governing instrument or bylaws by a broadly based membership.

Therefore, please modify your Board of Directors to place control in the hands of unrelated individuals selected from the community you will serve. We recommend that at least 51% of your board is unrelated, with a minimum of 3 board members. Please submit the enclosed attachment signed by the new board member for each new member.

If you are unwilling to do so, please explain your position.

5. Your organization states in its narrative description of its activities, that it is organized for scientific purposes. Describe in detail how your organization meets the requirements of a tax-exempt scientific organization as defined in section 501(c)(3) of the Code and section 1.501(c)(3)-1(d)(5) of the Treasury Regulations. Specifically, scientific research must be

carried on in the public's interest and does not include scientific research activities of a type ordinarily carried on incident to commercial operations. Examples of scientific research that will be considered carried on in the public's interest include "(1) Scientific research carried on for the purpose of aiding in the scientific education of college or university students; (2) scientific research carried on for the purpose of obtaining scientific information, which is published in a treatise, thesis, trade publication, or in any other form that is available to the interested public; (3) scientific research carried on for the purpose of discovering a cure for a disease; or (4) scientific research carried on for the purpose of aiding a community or geographical area by attracting new industry to the community or area or by encouraging the development of, or retention of, an industry in the community or area." Treas. Regs. §1.501(c) (3)-1(d)(5)(iii).

6. Will your organization make public on a nondiscriminatory basis any patents, copyrights, processes, formulas, which results from any scientific research conducted by your organization? If yes, describe in detail how your organization intends to make this information public, including a list of publications and websites where this information will be disseminated.
7. If applicable, describe any restrictions that will be placed on the dissemination of scientific research results that your organization will make public.
8. Describe whether your organization will retain (directly or indirectly) the ownership or control of the patents, copyrights, processes, or formulae resulting from its research.
9. In reference to any open source software distributed by your organization, describe whether your organization will retain (directly or indirectly) the ownership or control of the patents, copyrights, processes, or formulae resulting from any updates, upgrades, fixes, or patches created by the public and distributed back to the organization pursuant to any open source license.
10. Provide a sample copy of all types of licenses your organization plans to issue, and a statement, pertaining to each sample license provided, whether there will be any material deviations from the samples provided and the licenses actually issued by your organization.
11. Describe what scientific results the organization hopes to achieve, such as software, industry standards, etc.
12. Describe to whom will be attributed ownership of any intellectual property rights developed by the organization.
13. Has the organization developed an alpha version of any software? If yes, describe in detail the software, its purpose, and how it was developed.
14. Your organization states in its narrative description of activities that it is organized for educational purposes. Describe in detail how your organization meets the requirements of a tax-exempt educational organization

as defined in section 501(c)(3) of the Code and section 1.501(c)(3)-1(d)(3) of the Treasury Regulations. Specifically, a qualifying 501(c)(3) educational organization must be operated to (i) instruct or train the individual for the purposes of improving or developing his/her capabilities, or (ii) instruct the public on subjects useful to the individual and beneficial to the community. Treas. Regs. §1.501(c)(3)-1(d)(3)(i). Pursuant to the Treasury Regulations, an example of a qualifying educational organization is an organization whose activities consist of presenting public discussion groups, forums, panels, lectures, or other similar programs. Treas. Regs. §1.501(c)(3)-1(d)(3)(ii)(example (2)).

15. Describe on what topic(s) your organization is attempting to educate the public.
16. Provide a list of and copies of all individual training, instructional material or educational material your organization utilizes in achieving its educational purpose.
17. Provide a list of and copies of all individual training, instructional material or educational material published by your organization.
18. Provide a schedule of dates, times, and locations of all educational lectures, seminars, forums, classroom instruction or similar programs your organization sponsored for the purpose of meeting its educational requirement.
19. Does your organization publish an educational journal? If so, provide copies of said journal.
20. Does your organization have a physical location to which the public arrives to receive education? Describe said facility.
21. If education material is presented via the organization's website, provide links to the web sites, along with hard copies of materials posted on the website. Please also provide any materials that are in "members only" sections, on any Facebook/Twitter/etc. pages.
22. If the organization provides an internet forum for the public to ask questions about the organization's activities, then provide the following information:
 - a. Describe how the forum is operated and moderated;
 - b. Describe the organization's process of responding to questions; and,
 - c. Describe whether the forum is open to the public, that is, the general public is able to respond to and answer questions posted on the forum.
23. Describe your organization's use of volunteers, including:
 - a. What percentage of the organization's labor force is comprised of volunteers;
 - b. What range of duties do the volunteers undertake;
 - c. What percentage of the organization's volunteers have fixed hours or days on which they are required to be present for the organizations activities;

- d. What percentage of the organization's volunteers report to organization's physical location to volunteer; and,
 - e. What percentage of the organization's volunteers conduct their volunteer activities via the internet and/or email.
- 24. Provide an updated copy of the Financial Data referenced on Part IX of your 1023 Application.
 - 25. Describe in detail your fund raising efforts pertaining to line 1, of Part IX. Include a list of all pending grants.
 - 26. Describe in detail your expenses listed on line 20, of Part IX.
 - 27. Describe in detail your expenses listed on line 22, of Part IX.
 - 28. Describe in detail your expenses listed on line 23, of Part IX.
 - 29. Describe whether your organization provides any goods or services for a fee. If yes, describe in detail the goods or services sold and the fees charged.
 - 30. Describe whether your organization's members, directors, officers, employees or volunteers provide any goods or services (whether through the organization or on their own) for a fee pertaining to the goods or services the organization provides.
 - 31. Your activities state that 50% of the activities is to develop openly licensed hardware, 20% of the activities is supporting the open design community at large, and 10% of the activities is to develop new enabling spaceflight technologies. Only 20% of your activities is education and outreach, part of which is presenting at industry technical conferences. Please explain how your activities fulfill exclusively exempt purpose(s) under Section 501(c)(3). Please also explain how your organization is different than that of a commercial organization with similar activities and purposes.
 - 32. You indicate that there is an agreement between your organization and TAPR. Please send us a copy of this agreement. Please explain the roles of each entity and give us more detailed information.
 - 33. You indicate that there will be an online catalog. What will this online catalog contain? Please give us more details regarding your online catalog. Please also explain how it furthers an exclusively exempt purpose under Section 501(c)(3).
 - 34. You indicate that you will provide your "Rocket Shop" to people working on their NAR certifications. Please give us more information on what a NAR certification is. Will these people be working on items that they will hold intellectual rights to? Will they be working on items that they will financially benefit from being able to sell? How does this activity further an exclusively exempt purpose under Section 501(c)(3)? Also, if the people using this space will benefit from the items they work on there, how is it not private benefit to them?

35. Do you have any links to a for-profit organization? Please submit a statement as to whether you do or not.

If you do have a relationship with any for-profit, please address the following:

Separately, for EACH organization that is a related organization or is an organization you are partnered/affiliated with, please answer the following:

- a. Name the organization you have a relationship or affiliation with.
- b. Give us their EIN (if you have it).
- c. Are they a domestic or foreign entity?
- d. Describe the nature of their business?
- e. Describe your relationship with them.
- f. Describe any space you share with them. Under what conditions?
- g. Describe any overlapping of officers. Under what conditions?
- h. Describe any overlapping of activities.
- i. Describe any services they provide to you. Describe how they were selected to provide those services. Describe how the prices were determined and how it was determined that they were at or below fair market value.
- j. Remit copies of any contracts, agreements, etc. that you have with them. If you do have a verbal agreement, please describe it.
- k. Any other information you feel is pertinent to this issue.

Please provide detailed answers to these questions.

PLEASE DIRECT ALL CORRESPONDENCE REGARDING YOUR CASE TO:

US Mail:

Internal Revenue Service
Exempt Organizations
P. O. Box 2508
Cincinnati, OH 45201
ATT: Joy McCoy
Room 4525
Group 7828

Street Address:

Internal Revenue Service
Exempt Organizations
550 Main St, Federal Bldg.
Cincinnati, OH 45202
ATT: Joy McCoy
Room 4525
Group 7828

STATEMENT OF BOARD MEMBER

I, _____ hereby agree to participate on the Board of
(Name of board member)

Directors for _____
(Organization name)

In doing so, I will take an active part in the operation and decision making processes of this organization. In addition, I hereby state that I will not be compensated for my participation as a director, nor am I related to any existing board members or officers of the organization. My qualifications are as stated below:

To insure that our organization will serve public interests and not the personal or private interests of a few individuals, unrelated individuals selected from the community will serve on and control our Board of Directors.

Members of the Board will be selected from the following categories; (1) community leaders, such as elected or appointed officials, members of the clergy, educators, civic leaders, or other such individuals representing a broad cross-section of the views and interests of your community, (2) individuals having special knowledge or expertise in your particular field or discipline in which your organization is operating, (3) public officials acting in their capacities as such, (4) individuals selected by public officials, and (5) individuals selected pursuant to your organizations governing instrument or bylaws by a broadly based membership.

Signature of Board Member

Date



DATE:	DOCUMENT ID	DESCRIPTION	FILING	EXPED	PENALTY	CERT	COPY
01/29/2009	200902900672	DOMESTIC ARTICLES/NON-PROFIT (ARN)	125.00	.00	.00	.00	.00

Receipt

This is not a bill. Please do not remit payment.

GREGORY MORAN
2640 NETHERLAND DR
APT. 208
DAYTON, OH 45431

STATE OF OHIO CERTIFICATE

Ohio Secretary of State, Jennifer Brunner**1832487**

It is hereby certified that the Secretary of State of Ohio has custody of the business records for

MACH 30, INC.

and, that said business records show the filing and recording of:

Document(s)
DOMESTIC ARTICLES/NON-PROFIT

Document No(s):
200902900672



United States of America
State of Ohio
Office of the Secretary of State

Witness my hand and the seal of
the Secretary of State at Columbus,
Ohio this 27th day of January, A.D.
2009.

Ohio Secretary of State



Prescribed by:

The Ohio Secretary of State
Central Ohio: (614) 466-3910
Toll Free: 1-877-SOS-FILE (1-877-767-3453)

www.sos.state.oh.us
e-mail: busserv@sos.state.oh.us

Expedite this Form: (Select One)	
Mail Form to one of the Following:	
<input type="radio"/> Yes	PO Box 1390 Columbus, OH 43216
*** Requires an additional fee of \$100 ***	
<input checked="" type="radio"/> No	PO Box 670 Columbus, OH 43216

INITIAL ARTICLES OF INCORPORATION

(For Domestic Profit or Nonprofit)

Filing Fee \$125.00

RECEIVED BY
JAN 27 2009
Ohio Secretary of State

THE UNDERSIGNED HEREBY STATES THE FOLLOWING:

(CHECK ONLY ONE (1) BOX)

<input type="checkbox"/> (1) Articles of Incorporation Profit (113-ARF) ORC 1701	<input checked="" type="checkbox"/> (2) Articles of Incorporation Non-Profit (114-ARN) ORC 1702	<input type="checkbox"/> (3) Articles of Incorporation Professional (170-ARP) Profession _____ ORC 1785
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Complete the general information in this section for the box checked above.

FIRST: Name of Corporation Mach 30, Inc.

SECOND: Location Fairborn Greene
(City) (County)

Effective Date (Optional) _____ Date specified can be no more than 90 days after date of filing. If a date is specified, the date must be a date on or after the date of filing.
(mm/dd/yyyy)

☐ Check here if additional provisions are attached

Complete the information in this section if box (2) or (3) is checked. Completing this section is optional if box (1) is checked.

THIRD: Purpose for which corporation is formed

To hasten the advancement of humanity into a spacefaring civilization through sustainable leadership,

open design practices, and a bias toward mature technology

Complete the information in this section if box (1) or (3) is checked.

FOURTH: The number of shares which the corporation is authorized to have outstanding (Please state if shares are common or preferred and their par value if any)

(Refer to instructions if needed)

(No. of Shares)	(Type)	(Par Value)
-----------------	--------	-------------

Completing the information in this section is optional

FIFTH: The following are the names and addresses of the individuals who are to serve as initial Directors.

Joseph Simmons

(Name)

1483 Sanzon Dr

(Street)

NOTE: P.O. Box Addresses are NOT acceptable.

Fairborn

(City)

OH

(State)

45324

(Zip Code)

Maureen Carruthers

(Name)

1483 Sanzon Dr

(Street)

NOTE: P.O. Box Addresses are NOT acceptable.

Fairborn

(City)

OH

(State)

45324

(Zip Code)

Gregory Moran

(Name)

3012 Creekbend Dr.

(Street)

NOTE: P.O. Box Addresses are NOT acceptable.

Plano

(City)

TX

(State)

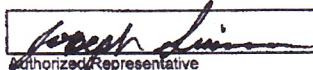
75075

(Zip Code)

REQUIRED

Must be authenticated
(signed) by an authorized
representative

(See Instructions)


Authorized Representative

Joseph Simmons

(Print Name)

01.24.2009

Date

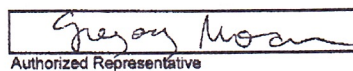

Authorized Representative

Maureen Carruthers

(Print Name)

1/24/09

Date


Authorized Representative

Gregory Moran

(Print Name)

24 Jan 09

Date

09-gm

Complete the information in this section if box (1) (2) or (3) is checked.

ORIGINAL APPOINTMENT OF STATUTORY AGENT

The undersigned, being at least a majority of the incorporators of Mach 30, Inc.
hereby appoint the following to be statutory agent upon whom any process, notice or demand required or permitted by
statute to be served upon the corporation may be served. The complete address of the agent is

Joseph Simmons

(Name)

1483 Sanzon Dr

(Street)

NOTE: P.O. Box Addresses are NOT acceptable.

Fairborn

(City)

, Ohio

45324

(Zip Code)

Must be authenticated by an
authorized representative

Joseph Simmons
Authorized Representative

01.24.2009

Date

Michael A. Smith
Authorized Representative

1/24/09

Date

Gregory Moran
Authorized Representative

2 Jan 08

Date

09-gm

ACCEPTANCE OF APPOINTMENT

The Undersigned, Joseph Simmons, named herein as the

Statutory agent for, Mach 30, Inc.
, hereby acknowledges and accepts the appointment of statutory agent for said entity.

Signature: Joseph Simmons

(Statutory Agent)



DATE	DOCUMENT ID	DESCRIPTION	FILING	EXPED	PENALTY	CERT	COPY
12/21/2010	201035401338	DOMESTIC/AMENDED RESTATED ARTICLES (AMA)	50.00	.00		.00	.00

Receipt

This is not a bill. Please do not remit payment.

MACH 30
5732 CRAIGMONT CT.
HUBER HEIGHTS, OH 45424

STATE OF OHIO CERTIFICATE

Ohio Secretary of State, Jennifer Brunner

1832487

It is hereby certified that the Secretary of State of Ohio has custody of the business records for

MACH 30

and, that said business records show the filing and recording of:

Document(s):

DOMESTIC/AMENDED RESTATED ARTICLES

Document No(s):

201035401338



United States of America
State of Ohio
Office of the Secretary of State

Witness my hand and the seal of the
Secretary of State at Columbus,
Ohio this 16th day of December,
A.D. 2010.

Ohio Secretary of State



Prescribed by:

The Ohio Secretary of State

Central Ohio: (614) 466-3910

Toll Free: 1-877-SOS-FILE (1-877-767-3453)

www.sos.state.oh.us

e-mail: busserv@sos.state.oh.us

Expedite this Form: (Select One)

Mail Form to one of the Following:

☐ Yes

PO Box 1390

Columbus, OH 43216

*** Requires an additional fee of \$100 ***

☒ No

PO Box 1329

Columbus, OH 43216

Certificate of Amendment by Shareholders or Members

(Domestic)

Filing Fee \$50.00

2010 DEC 16 AM 11:31

(CHECK ONLY ONE (1) BOX)

(1) Domestic for Profit

☐ Amended

(122-AMAP)

PLEASE READ INSTRUCTIONS

☐ Amendment

(125-AMDS)

(2) Domestic Nonprofit

☒ Amended

(126-AMAN)

☐ Amendment

(128-AMD)

Complete the general information in this section for the box checked above.Name of Corporation Mach 30, Inc.Charter Number 1832487Name of Officer Joseph SimmonsTitle President☒ Please check if additional provisions attached.

The above named Ohio corporation, does hereby certify that:

☒ A meeting of the ☐ shareholders ☒ directors (nonprofit only)☐ members was duly called and held on September 10, 2010
(Date)at which meeting a quorum was present in person or by proxy, based upon the quorum present, an affirmative vote was cast which entitled them to exercise 100 % as the voting power of the corporation.☐ In a writing signed by all of the ☐ shareholders ☒ directors (nonprofit amended articles only)☐ members who would be entitled to the notice of a meeting or such other proportion not less than a majority as the articles of regulations or bylaws permit.**Clause applies if amended box is checked.**

Resolved, that the following amended articles of incorporations be and the same are hereby adopted to supercede and take the place of the existing articles of incorporation and all amendments thereto.

All of the following information must be completed if an amended box is checked.
If an amendment box is checked, complete the areas that apply.

FIRST: The name of the corporation is: Mach 30

SECOND: The place in the State of Ohio where its principal office is located is in the City of:

Huber Heights

(city, village or township)

Montgomery

(county)

THIRD: The purposes of the corporation are as follows:

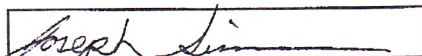
This corporation is organized and operated exclusively for scientific and educational purposes within the meaning of 501(c)(3) of the Internal Revenue Code.

The specific purpose of the corporation is to hasten the advancement of humanity into a spacefaring civilization through sustainable leadership, open design practices, and a bias toward mature technology.

FOURTH: The number of shares which the corporation is authorized to have outstanding is: _____
(Does not apply to box (2))

REQUIRED

Must be authenticated
(signed) by an authorized
representative
(See Instructions)



Authorized Representative

Joseph Simmons, President

(Print Name)

5722 Craigmont Ct.

Huber Heights, OH 45424

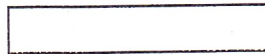
December 6, 2010

Date



Authorized Representative

(Print Name)



Date

Amended Articles -- Mach 30

Additional Provisions

Charter Number: 1832487

FIFTH: The following are the names and addresses of the individuals who are to serve as initial Directors.

Joseph Simmons
5722 Craigmont Ct
Huber Heights, OH 45424

Maureen Carruthers
5722 Craigmont Ct
Huber Heights, OH 45424

Gregory Moran
3012 Creekbend Dr.
Plano TX 75075

SIXTH: Additional Provisions.

The property of this corporation is irrevocably dedicated to scientific and educational purposes. Upon the dissolution or winding up of the corporation, its assets remaining after payment, or provisioned for payment, of all debts and liabilities of this corporation shall be distributed to a nonprofit fund, foundation, or corporation which is organized and operated exclusively for scientific and educational purposes and which has established its tax-exempt status under section 501(c)(3) of the Internal Revenue Code.

No substantial part of the activities of this corporation shall consist of carrying on propaganda, or otherwise attempting to influence legislation (except as otherwise provided by 501(h) of the Internal Revenue Code), and this corporation shall not participate in, or intervene in (including the publishing or distribution of statements), any political campaign on behalf of, or in opposition to, any candidate for public office.

No part of the net earnings of this corporation shall inure to the benefit of, or be distributable to, its members, directors, officers, or other private persons, except that this corporation shall be authorized and empowered to pay reasonable compensation for services rendered and to make payments and distributions in furtherance of the purposes set forth in these articles.

Notwithstanding any other provisions of these articles, this corporation shall not carry on any other activities not permitted to be carried on (1) by a corporation exempt from federal income tax under Section 501(c)(3) of the Internal Revenue Code or (2) by a corporation contributions to which are deductible under Section 170(c)(2) of the Internal Revenue Code.



Home

Mach 30: Foundation for Space Development

Sustainable + Open + Mature → Spacefaring

Spacefaring - *adj.*

1. Pursuing a life in space: *spacefaring peoples of the world; spacefaring nations.*
2. Fit for travel in space: *spacefaring vessels.*

Mach 30 is a non-profit organization dedicated to the advancement of humanity into a spacefaring civilization. We believe the best path to that goal is through sustainable leadership, open design, and the use of mature technology.

Get Involved

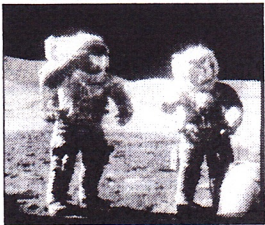


Photo credit NASA

Volunteer today and play your part in advancing humanity into a spacefaring civilization.

Road Map

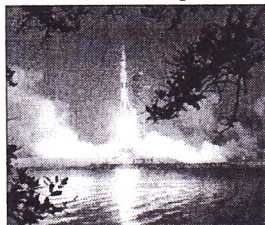


Photo credit NASA

See how today's work forms the foundation for tomorrow's success.

Projects

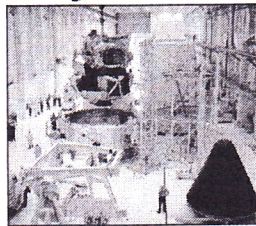


Photo credit NASA

Go deeper into Mach 30, by joining a project team.

About Mach 30

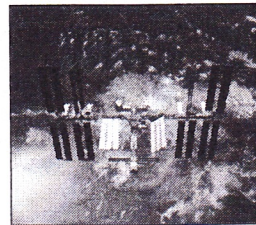


Photo credit NASA

Learn about Mach 30's mission and the three core principles that shape our work.

Mach 30 News

Is This You?

Thu, 05/05/2011 - 12:39 — MEC

Do you LOVE (and I mean love) to code?

Do you believe closed source software might constitute a violation of your first amendment rights?

Do you like to tinker with hardware almost as much as you like writing software?

Are you working a "regular" software job that doesn't scratch your itch to create truly beautiful, useful and generally awesome code?

Are you a fan of Ruby on Rails?

Do you want to do your part to make it possible for people like you to go to outer space?

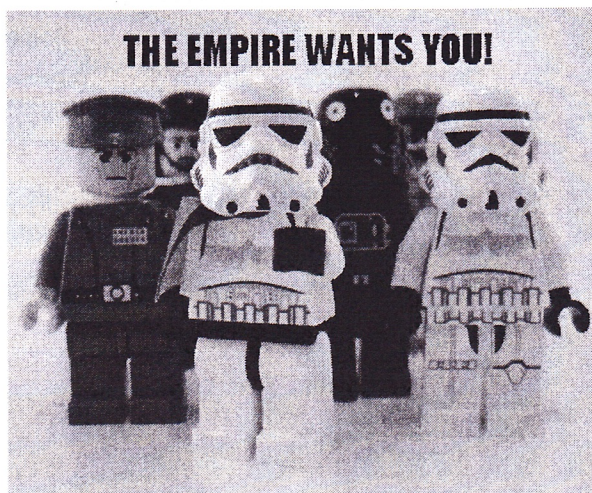


photo credit: flicker user leg0fenris

If so, Mach 30 wants you to help develop The Open Design Engine (ODE).

ODE will be a place for engineers and hobbyists to design and share Open Source Hardware (think Sourceforge.net for hardware.)

If you want to be among the first to get an account and help build the site, let us know by sending me a message.

Software not your thing?

It's cool. If you know someone who fits the profile, please forward this e-mail and encourage them to get an ODE account. There will be lots of other ways to get involved in the upcoming months, so make sure you are on the cool people list* so you'll be the first to know when your perfect gig is ready for you.

All the best,

P.S. J. Simmons, our president, also known as Jedibfa wants me to assure you we are not now, nor will we ever be, anything remotely like the empire. Rebels Unite. #thatisall

*others might call this our "mailing list" but it's all the same.

Mach 30 Newsletter

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NASA Explores Open Source Space

Wed, 05/04/2011 - 14:50 — MEC

(So this is actually the March/April Newsletter. I just didn't get it posted here until May 4th. My Bad. --MEC)

At Mach 30, we dream of a world where people live and work on other worlds and in space stations. When we say people, we don't mean six at a time, we mean hundreds, then thousands, then tens of thousands. One of the keys to making this dream a reality is to share the technology of space as widely as possible, and so we are doing all of our engineering work as open source hardware, and we are not alone.



When we founded Mach 30, there was only one other group thinking along similar lines, now there are at least ten groups working to design open source spaceflight hardware (see the front page of our website for a list of similar organizations). If companies like SpaceX, XCOR, and Scaled Composites are members of the New Space movement, then these ten organizations and those that follow should be called the Open Source Space movement.

The Open Source Space movement is very young. All of the organizations in the movement are well under five years old, and many are still in the process of incorporating (not that that stops them from designing and building spaceflight hardware).

In very exciting news, now we newcomers have old-school company in our explorations of open source space ideas: NASA.

Open NASA is a collaborative blog written by NASA employees across the agency, and occasional invited guests. The authors come from a perspective within NASA of transparency, accessibility, risk, honesty, merit, and participation. They have insight into what is and could be happening inside the U.S. space program— but know there are also important voices outside NASA, and so they are creating a space where those ideas can be shared and discussed.

This is a huge step for an organization with a history of working behind closed doors--let's congratulate them for the effort!

Visit OpenNASA.com and show your support by leaving a comment and sharing the site with your friends. Let's show NASA how well open space can work!

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Why do we need another Space Nonprofit?

While many people and organizations are working toward a world where space travel is more common, they are all working alone. Every government, company and individual that aims to send people into orbit and beyond starts from scratch. Even the existing space nonprofits primarily focus on advocacy of the existing system. Because of this, each venture tends to run out of money before they get to the sustainability part.

Mach 30 will combat this issue by using the nonprofit model to create a community where these building blocks of space access are developed in an open way--and then shared as widely as is legally possible.

Confused? [We explained it better in the video.](#)

What are the Next Steps?

Before the Mach 30 community can start designing and building space hardware, we need someplace to do it--a home. Since working collaboratively is required, this home needs to be virtual, and since going to space is hard, it will need some very specific features. Here is what we need before moving in:

Open Design Engine (ODE)

Think of this as a virtual workshop where contributors will be able to store, share, and collaborate on engineering projects. (If you are an open source software fan, think sourceforge.)

Since working collaboratively is at the core of Mach 30's values, very little actual engineering can happen before this site is available. We've been working with [CSTART](#) to develop a site to meet these needs. [Here's what we've got so far.](#)

Openeering

In addition to a place to share, our staff and volunteers will need tools with which to work. Traditional engineering tools and

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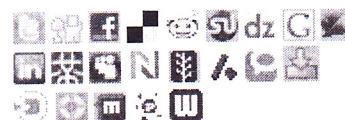
Contact Us!

If you have ideas, questions or space-faring dreams, we want to hear them. You can e-mail Mach 30's president, [J. Simmons](#) by [clicking here](#). Or just respond to this e-mail by clicking reply. Your message will go to [Maureen Carruthers](#).

Share!

If you have friends who want to visit space, make sure they know about Mach 30. Just [forward this e-mail](#) and encourage them to subscribe.

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software are expensive. A single seat of [Matlab](#) starts at \$2000. Luckily, there are free or low cost alternatives available--they are just difficult to find.

That's where [Openengineering](#) comes in. This open wikispaces site serves as a repository for all the tools we know about so far.

A resource like this is only as good as the information it contains, so if you know of free alternatives to common engineering [Join the wiki](#) to start sharing your favorite tools with the community.

Licenses

The Open Source software model works as well as it does because the software it produces is licensed in a way that makes it easy to share and, to one degree or another, requires those who use the resulting software to continue that sharing. We will need a similar licensing structure for hardware. [Here's what we've got so far.](#)

Get Involved!

Here's how you can help build our new "home."

- Join the [Openengineering Wiki](#) and help develop the resource list.
- To help develop the beta site for ODE, [e-mail J](#) to get meeting notifications. A background in Ruby or Python web development is required.
- If you have a background in intellectual property or licensing, please review and comment on the [Open Design Pledge](#).

None of these options grabbing your attention? [There are many more opportunities available in the forum.](#)

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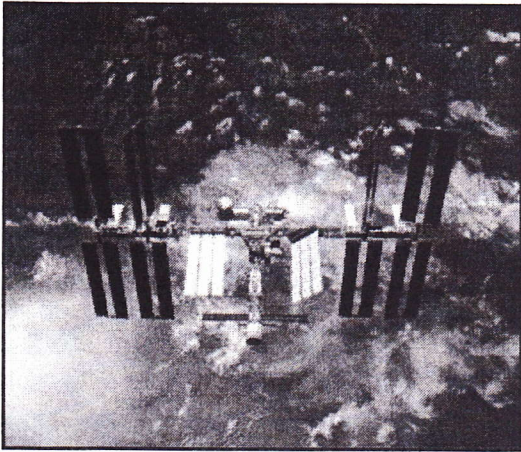
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Tue, 02/12/2008 - 23:25 — andy.mcgrady



In 2009, the Review of U.S. Human Spaceflight Plans Committee, a Presidential panel tasked with evaluating the future of NASA's human exploration programs, concluded the goal of human space exploration is "to chart a path for human expansion into the solar system." Such expansion, by its definition, would imply people moving permanently into space to live and work on other worlds and in space habitats. In other words, the goal of human space exploration is to lead humanity to become a spacefaring civilization. This goal is Mach 30's mission:

To hasten the advancement of humanity into a spacefaring civilization through sustainable leadership, open design practices, and a bias toward mature technology

History, as well as the upcoming gap in U.S. human space flight, proves our current space exploration plans aren't working. A totally new approach is required. Rather than wait for the government, Mach 30 is building a community of individuals who, by working together, can take humanity to space. Mach 30's approach is based on three principles:

Sustainable Leadership which guides decision makers to favor long term goals over short term gains

Open Design which aims to replicate the community driven success of open source projects like Linux, and Wikipedia in the arena of engineered products

Mature Technology Bias which challenges engineers to demonstrate what can be done with today's technology instead of perpetually proposing solutions that require decades of development.

[See more of our vision here.](#)

Photo credit NASA

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