



May

Minneapolis, Minnesota U.S.A.

2006

TCRC Building Contest May 20th

by Jay Bickford

The annual TCRC Building Contest is scheduled for Saturday, May 20th at the Jordan Field. The event is scheduled to start at 10:00 AM, with judging starting at about 11:00 AM. There will also be lunch on the grill at about 12 noon.

Jay Bickford, the CD for this year's event, thinks that this year's building contest could just turn out to be one of the biggest in recent memory thanks to TCRC President Bill Jennings' Kit Building initiative this past winter. If you are one of the people that started a kit this past winter, finish them up and bring them on out. We would love to have you come out and be a part of the fun.

There will be prizes for four categories again this year: Trainer, Scale, Sport/Pattern, and ARF. First place in each category will win a \$25 Gift Certificate to Hobby Warehouse. In addition there will be a "Peoples Choice Award" chosen for the most popular plane. This award also includes a \$25 Hobby Warehouse Gift Certificate. Judging will be based on construction / assembly, modifications, originality, quality of workmanship, and overall craftsmanship. In addition, the plane must be airworthy, although it is not required that it flies at the building contest.

During the day, the runways will be available for general flying and will be open to anyone who brings out a plane, whether or not it was entered in the building contest.

So get those finishing touches on your winter building projects and have them out to the field on Saturday, May 20th at 10:00 AM, for the 2006 TCRC Building Contest.

TCRC Moves To Fairgrounds Site In April

The Minnesota River left its banks on March 31st and forced TCRC to move to its auxiliary flying site at the Scott County Fairgrounds.

President Bill Jennings was just completing negotiations with the Jim Luce of the Fairgrounds Board when the River started to rise. TCRC has been using this site as its backup for many years but hadn't had much need until last year when there was minor flooding over the field four different times.

The Club and the Fairgrounds Board came to a nice compromise on the use of the field just in the nick of time.

As of press time, the water was still on the field but receding rapidly and it was hoped that the Jordan site would be available at the start of May.

Regardless of which field is open, if you want to fly you always have a place to go as a member of TCRC. Put in a flight today!



From the President's Hangar

by Bill Jennings

The warmer weather has finally returned to Minnesota with daily temperatures reaching into the 70's. Unfortunately, the warmer days have brought with them the annual snowmelt and the flooding of our flying field. The field started to flood on March 31st, when the water in the Minnesota River reached a height of approximately 18 feet. Unfortunately, this caused the cancellation of the April Fools' Fun Fly the next morning. At the flood crest the water rose to over 26 feet, which actually covered the lower shingles on our shelter roof. That's the equivalent of over 8 feet of water on the field! Fortunately, we've had the use of the Scott County fairgrounds as an alternate flying site while we waited for the water to recede. By the time this month's newsletter goes to print the water should have receded fully. Let's hope that Mother Nature doesn't provide us with a repeat performance of last year when the field flooded on four separate occasions.



**John Dietz shares his expertise at the last Kit Building Workshop.
(Photo by Bill Jennings)**

As you read this column, the last session of the Kit Building Workshop is over, and I'm really sorry to see it end. The Workshop has provided an excellent opportunity for the participants to learn the fundamentals of kit building. In addition, the presenters shared many tips and tricks they have learned through their many years of building experience. I've also had the chance to learn a little more about working with fiberglass and balsa sheeted foam core construction, which I'm not ready to tackle just yet. What started out as an idea for a new club winter activity has really exceeded my expectations. Thanks again to the presenters for sharing their valuable time and expertise. They are Dave

Schwantz, Dave Andersen, Sherwood Heggen, Ted Carl, John Dietz, and Rick Smith. I'm definitely going to promote another Kit Building Workshop for next winter, and will be among the first to sign up. I'm sure that even after completing a few kits, I'll still be searching for ways to improve my kit building skills.

I've also learned a lot by attending each of the Workshop Tours scheduled by Chris O'Connor this past winter. Thanks to Chris and members Larry Couture, Jim Miller, John Dietz, and Rick Smith for providing their generous hospitality to the other members. I came away from each tour with new ideas for organizing my workbench, unique ways to store a growing collection of models, controlling sanding dust, and simply making my workshop a better place to work. With lots of time to clean and organize, I hope other members will be willing to open their workshops to the membership next winter.

The Cleanup Day and Fly-in has been scheduled a month earlier this year, so the field will be in top shape for Model Aviation Day, our annual open house. I hope to see a good turnout of members this year on May 6th to help with the removal of the silt and debris that the Minnesota River is sure to leave behind. Let's hope that the field has a chance to dry out sufficiently by that date. If not, we'll postpone the cleanup until the conditions have improved. Check the website for last-minute detail . . . With enough volunteers, the cleanup can be completed in a fairly short period of time, and we can all spend the rest of the day flying our favorite models.

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From The President's Hanger

Continued From Page 2

The month of May also provides two flying activities that have been very popular in the past – the Spring Float Fly on May 13th and the Building Contest and Fun Fly on May 20th. Last year the Spring Float Fly was cancelled due to high winds and a torrential downpour. Let's hope for a return to better flying weather this year. The Building Contest will provide the opportunity for the participants of the Workshop to show-off their projects and compete for some prizes. The kit-built entries will permit the contest to revert to its original intent as a contest to identify the best kit builders in the club. Those members who have assembled Almost Ready To Fly models will continue to compete this year in a separate ARF category.

Until next month . . . see you at the field!



Important Notice From The AMA Please Read

Your Support is Needed!

The United States House of Representatives, 109th Congress, 2nd Session:

To prohibit defense contractors from requiring licenses or fees for use of military likenesses and designations.

Notice to AMA Members:

Your support is important to make our campaign a success. In September 2005 in his monthly column in Model Aviation, Dave Brown, AMA president, reported on who has regulatory authority over model airplanes. This can be seen at www.modelaircraft.org/mag/august2005/president.htni. The subject addressed the trademark issue for Scale models. Several aircraft companies have been demanding royalties from model manufacturers. We need to stop this and stop this now. Let me give you some current information.

As you may know, more than a year ago, Congressman Robert Andrews (D-NJ) attempted to attach an amendment to the bill banning the licensing and collecting of royalties by defense contractors for replicas of military models. This amendment passed the House of Representatives but was ultimately defeated when the bill was sent to the Senate for ratification. However, the issue is still very much alive. Mike Bass of Stevens International has been working closely with Congressman Andrews' office. Mr. Andrews is very much in favor of our side of the issue and wishes to continue this quest on behalf of the hobby and toy industry. ☺



Swap-a-ganza
 Sunday - May 21st
 8:00 AM - ???
 Sell your new & used
 stuff in our parking lot!



7144 Chicago Ave. S. Richfield, MN

Hours:
 Mon - Fri 10 - 7
 Sat 10 - 6

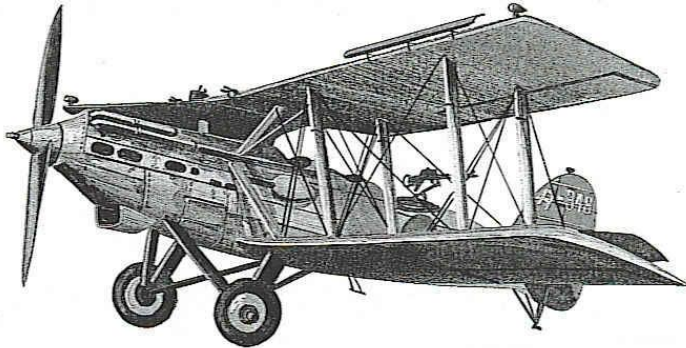
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Mitsubishi B 2 M

by Conrad Naegele

The April Mystery Plane was the Japanese Mitsubishi B 2 M.



In 1927, the Imperial Japanese Navy, in an expansionist phase and in preparation for the impending China war, issued specifications for an all-metal replacement for their again B1M, a carrier-based bomber. Mitsubishi proposed 3 designs, strangely enough, all from British design teams. Herb Smith – Sopwith, Blackburn – under G. E. Petty; and Handley-Page, George Volkert. Mitsubishi chose the Blackburn design, to feature a 600 horsepower Hispano-Suiza engine. The prototype was delivered in May 1930.

This was an all-metal, strut-braced with flying wire braced, traditional biplane configuration. It was rather cumbersome, and heavier than expected, but easy to fly and very sturdy. It had early controllable leading-edge slats and retained fabric-covered control surfaces. Provisions were made to accept a number of different engines. One novel feature was the 3 open cockpits. Mr. Petty supervised the entire production run of about 104 units. This 4-aileron aircraft was successful and remained in service until 1940, just at the onset of WWII.

The B2M Torpedo Bomber had a wingspan of 50 feet, a gross weight of 7,900 pounds and a speed of 132 mph. For armament it carried two machine guns plus 1,700 pound bombs. The engine was a Hispano-Suiza 12-cylinder V liquid-cooled 600 horsepower engine and carried a crew of 2 or 3. ☺

TCRC Online.com

You Should Be Using It!

Calendar

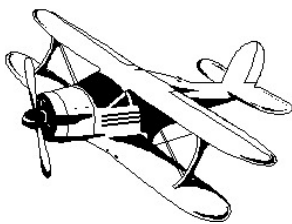
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|------------|---|
| May 6 | Jordan Field Clean-Up & Fly-In
10:00 AM |
| May 9 | TCRC Membership Meeting, 7:00 PM
Fellowship Hall
CrossPoint Church
Bloomington |
| May 13 | Spring Float Fly
Bush Lake, 11:00 AM
CD: Jim Cook |
| May 20 | Building Contest & Fun Fly, 11:00 AM
CD: Jay Bickford |
| May 21 | Hobby Warehouse Swap-A-Ganza
Parking Lot
8:00 AM to ??? |
| June 3 | Model Aviation Day & Open House
Jordan Field |
| June 10,11 | Combat Event
Jordan Field |

TCRC meets every month on the 2nd Tuesday at 7:00 PM in Fellowship Hall of CrossPoint Church located on the southeastern corner of the intersection of 98th Street and France Avenue in Bloomington. Guests are welcome to attend these meetings.

Model Aviation Day June 3rd

TCRC's Annual Model Aviation Day and Open House will be held at the Jordan Field on June 3rd. Watch TCRCOnline.com for up-to-date information on this event. ☺

Show & Tell



Some nice looking planes showed up at the April 11th membership meeting.



New member Mike Bellefueille had the plane that inspired him to get into the R/C hobby. This was a 40-size Carl Goldberg Skylane 62 on floats. The plane was built in 1989 by a neighbor of his who lived on a lake. He saw it fly many times and after the pilot passed away in 1999 the plane was given to him by the widow. The floats had been scratch-built and Mike has flown the plane off of water about 5 times.



Prolific ARF-builder Larry Couture had his plane of the month at the meeting. This was Thunder Tiger Bipe ARF that he installed a 30-size Wankel engine

in. He explained that this size Wankel was the equivalent of a 45-size 2-stroke engine. The bipe was done in red Monokote with white trim and look very nice. This is the second Wankel that Larry has purchased, and has not been in the air yet. He hopes to have his maiden flight in the near future.



Jay Bickford has his first-ever scratch-built airplane at the meeting. This was a 3DX profile aerobatic plane. It was covered with purple Ultrakote Lite, with white trim. The fuse was about 1-inch thick white B foam and the wings and stab were of Blue Core foam. He powered the plane with a HyMaxx 2812 brushless motor and he used a Thunder Power 2000 ma lithium battery coupled with a Castle Creations Phoenix 25 speed controller. At full throttle he gets about a 10 minute flight, and at varying throttle a maximum of 18 minutes of air time. He has put lots of flights on the plane and says that it has unlimited climb ability. The 3DX weighed in at 12 and one-half ounces without the battery and 17 ounces fully loaded. ☺

Spring Float Fly May 13th

The TCRC Spring Float Fly will be held at Bush Lake Park in Bloomington on Saturday, May 13th. Start time is 11:00 AM.

This is always a well-attended event by club members and members from other clubs, and there is always some great float planes to be seen.

Be a pilot, a helper and a spectator at the TCRC Spring Float Fly on May 13th at Bush Lake. ☺

New Members

TCRC gained another father/son tandem in the month of April.



Nolan Gartin lives at 1940 5th Avenue in Mankato, 56001. His phone number is 612-558-8046 and his e-mail address is rangerng@mn.rr.com. Nolan has a 40-size Superstar and is building a Corsair and a P-51. At the time of joining, he was looking for an instructor, and he was successful. On Wednesday, April 19th, while flying with Bill Jennings at the Fairgrounds, Nolan had his successful solo flight.



**Nolan on buddy box with Jeff Diesch.
(Photos by Bill Jennings)**

Jay Gartin, Nolan's father, lives at 7248 Paulsen Drive in Eden Prairie, 55346. He has previous RC flying experience, but as of press time, the editor did

not have his phone number, e-mail address or what planes he currently has or is working on.

Please introduce yourself and welcome Nolan and Jay to TCRC when you see them at a meeting or at the flying field. ☺

Safety At The Field Rules

by Larry Couture

Since the club meeting I have received from John Bittle a wealth of information that I hope I can share with all of you by way of this column over a period of a few weeks.

One of the rules that appears very obvious when one reads it is that all airplanes must have the name and address of its owner on it before flying. If it should fly away and is found or does damage to property it can be returned to owner or damages settled without large problems for the hobby.

Some rules are just plain common sense such as flight checking your model before flight so that all controls are working and in the proper direction. I would ask at this time to hold up your hand if this has at any time happened to you! You take off and up is down and right is left or any combination of improper control. I would see a lot of hands in the air and one would be mine. Now sometimes your lucky and you land with out total destruction of the plane, and other times you're not so lucky, and to think that a pre-flight check takes only a minute or two at best.

Last but not least I will close with a **PERSONAL CONDUCT VOW FOR ALL OF US:**

I will always conduct my self in a responsible manner. Conscious that the maintenance of safety for others and myself rests with my ability to design and construct sound-working models and to enthusiastically abide by the AMA Safety Code and TCRC Field Rules. I will abide by the decisions and follow the instructions of any designated person in charge or control of the session or event.

Enough said for this time. Keep 'em flying and land with the rubber side down. ☺

The Clouds

by Bill Kuhlman

(Additional information incorporated into this article was supplied by Technical Editor Ed McCollough.)

Clouds tell us a great deal about overall weather, and how the air and ground conditions are affected. Radio Control Soaring success is dependent upon all these factors.

Water evaporates into air warm enough to allow the presence of any water molecules. There is an upper limit of the number of water molecules that may exist in vapor form (i.e.: gaseous) in a certain volume of air and that limit is determined solely by temperature. As the temperature goes up, more water can 'evaporate'.

If the total amount of water that a unit volume could theoretically hold is already there, then the air is 'saturated' with respect to water vapor and can hold no more water molecules. If the unit volume cools a bit, some of the water held in that unit volume will come out.

Ordinarily there is enough microscopic dust in the air so that the water molecules readily attach themselves to the dust particles. These 'dust and water molecules' particles grow by accumulation. At some point the particles are big enough to absorb and scatter light and we 'see' clouds.

If the air temperature is cold enough, ice crystals can form spontaneously instead and you have the presence of clouds composed primarily of ice crystals, these are the very high, thin and wispy clouds that you see. While ice crystals can grow through the accumulation of molecules of water, ice crystals do not grow through the accumulation of more ice crystals.

On the other hand, water droplets can accumulate into larger droplets. When the droplet size is sufficient to fall against whatever air currents there are, it does so and if it doesn't evaporate before it hits the ground, you have a raindrop. Naturally, if there

are more little drops that can get all the way to the ground, you get 'rain'.

To better understand clouds, let us define the basic types. Stratus denotes a layer cloud; the prefix cirrus or cirro defines high ice clouds at altitudes ranging from 20,000 to 40,000 feet; cumulus means a heaping or high piling of clouds; the prefix alto describes a medium level cloud system ranging from 9,000 to 20,000 feet.

Following is a brief description of several of the basic cloud formations and what each tells us as applicable to general situations. Terrain influences weather and cloud formations and is significant under various conditions.

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ALTOCUMULUS -- fleecy, cottony clouds consisting primarily of broken whitish masses. Usually comprised of water but can contain ice crystals depending upon atmospheric conditions. Occasional light rain or snow may result. Sometimes these clouds blend into rainy, strong altostratus systems.

ALTOSTRATUS -- dense, heavy clouds appearing at a low level. These are deep gray or bluish in color. Typically comprised of water although they may contain ice crystals at higher levels. Precedes both warm and cold fronts. Expect steady rain or snow depending upon temperature and atmospheric conditions.

CIRROCUMULUS -- rippled layers or patches of ice clouds comprised of white, long, and drawn out cottony masses similar in appearance to a wave washing up on a sandy beach. Expect no precipitation from these clouds. If followed by thicker, heavier clouds, expect a drop in temperature and possible rain.

CIRROSTRATUS -- thin, white, hazy clouds of fairly uniform layer which do not blur the sun or moon but often cause halos. Comprised of ice. The sky may appear milky -- Expect fair weather with these clouds, however, they often precede a warm front, some light rain, with a rise in temperature to follow.

CIRRUS -- scattered clouds with a delicate, filmy, feathery appearance. Always comprised of ice

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The Clouds

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crystals. No precipitation from these clouds. Usually indicative of fair weather, however, if they are followed by a lower, thicker bank of clouds preceding a warm front, rain or snow may be forthcoming within 24 hours.

CUMULONIMBUS -- these are the ominous-appearing heavy mass of piling, towering cloud systems with extensive vertical development. The higher elevations are often spread out in the typical anvil shape. These clouds contain a large amount of water and ice and are associated with heavy rains or hail accompanied by thunderstorms or heavy snow.

Cumulonimbus clouds are associated with thunder storms. That means, you really don't want to be standing out in the meadow with your radio antenna sticking up in the air when said cumulonimbus has reached maturation.

There is also a type of cloud called mammatus. The name comes from the visual resemblance of the bottom of the cloud to mammary glands. The formation is due to incredibly violent and turbulent air currents around the bottom of the clouds.

(The last time I saw such clouds, they spawned at least one tornado and hail stones with an average size as big as a softball. If you're a model airplane pilot and you see such clouds, pack up quick and go home!)

CUMULUS -- fleecy, billowing cloud formations flat at the base with rounded outlines. These clouds are heaped up like packs of cotton. Comprised of water. No precipitation is expected from these clouds when by themselves and typically indicate fair weather.

NIMBOSTRATUS -- low hanging, shapeless clouds, dark gray in overall appearance. Comprised of both water and ice. Precipitation is typically continuous rain or snow.

STRATOCUMULUS -- appearance of large, rolling, endless dark clouds often fully covering the sky.

Usually comprised of water. Expect occasional drizzle or snow flurries. Indicative of a change in the weather.

STRATUS -- low hanging uniform layers of grayish clouds of great width. These clouds are usually comprised of water. May resemble fog not touching the ground (often seen hanging over the mountains or lying in valleys within the mountains). Occasional light drizzle or snow. Fair weather typically follows.

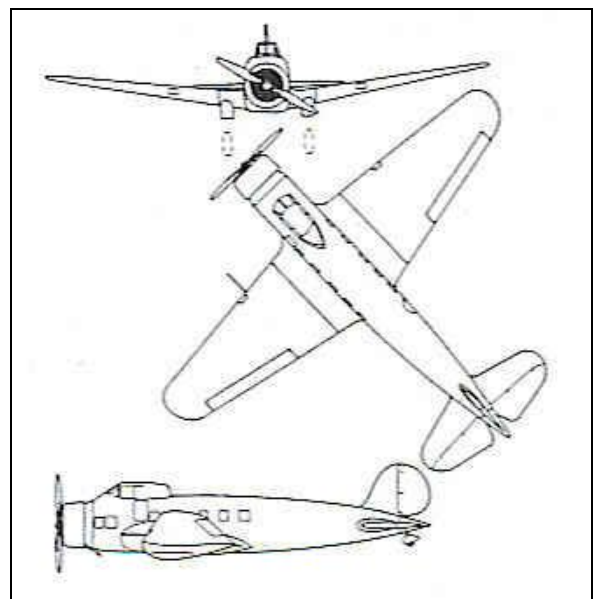
These are typical formations and conditions to be aware of. There are a number of highly volatile (e.g. tornadoes) and unusual cloud conditions that do occur dependent upon temperature, atmospheric conditions and terrain. When these threatening conditions do exist, we are made aware of their presence through our weather services. Fortunately, these are not typical, common occurrences in our lives.

As an RC pilot, it is beneficial to you to have a basic working knowledge of the clouds and how to utilize the conditions and their projections to your advantage.

Happy Flying!

(Reprinted from *The Spoiler*, newsletter of the Pikes Peak Soaring Society, Monument, Colorado, John Read, Editor.) ☺

May Mystery Plane



From The Co-Pilot's Seat

by Chris O'Connor

The building season is almost done, now its time to take that creation out to the field and fly. Mother Nature has given us a few more weeks to finish that winter project by flooding our field.

When we do get out to fly make sure you have done all your preflight checks. Your batteries are charged, discharged, and charged. Even your starting battery should be charged. Make sure you have fresh fuel, especially for gas engines. The gas from SA last fall isn't good enough. Car gas is only at its top condition for a few weeks. Aviation fuel is good for a few months. Even using that type, you should use fresh fuel. Make sure your prop is in good condition. Make sure your engine and muffler are tight. Go over your total airframe, make sure the hinges are good, even wiggle and tug on the control surfaces to make sure they are secure. Don't forget to check your wheels, its no fun to land with one missing. Last but not least range check your radio, even if it was good last year. The last thing you want to see happen is losing your plane over some simple thing that your overlooked.

Remember the building contest is coming up, so lets have lots of planes of all kinds entered in the event. Even if you don't think that yours compares to others, who cares, enter anyway, it's all just for fun.

Also I challenge everyone to try a couple of the aerobatic maneuvers, while you are flying, it will improve your abilities. When you do your aerobatics, try and be as precise as you can, make the plane perform what you want it to do. All this aerobatic stuff is designed not to get you to fly in a pattern contest, but you could, it's to improve your confidence and flying abilities every time you go flying. Remember, the more you do it the easier it becomes. Challenge yourself to fly in the wind. Maybe not 20-25mph right away, but 10-15, then 15-20, then 20-25. It's not that bad. Look at it as being able to land slower.

This month's program will be on aerodynamics and why our planes do what they do. The program will be given by our own, and very talented Dave Anderson. Dave's an excellent speaker. You won't want to miss this one. The June program will be on electrics, with Bob Savre doing the program. Bob had to cancel for the April meeting because of business.

TCRC has lost another former and longtime member. Mike Kuller passed away on April 7, 2006. Mike was a friend to a lot of us and throughout his modeling career, he was a very accomplished pattern flyer, an excellent builder, and a great friend. We will miss you Mike. Our deepest sympathies go out to Mike's wife, Ralieg, daughters, Sherry and Harmony, son Mark and all his family and friends.

Fully Charge Lipo Packs In 3 Minutes?

from Larry Edelman

In my travels this past week for some investment opportunities I stumbled across Altair Nano (ALTI) which has some potentially revolutionary developments in the lipo battery industry. Some of you may have heard or read about this but my guess is that most of you have not.

This company has developed, tested and is beginning manufacture for cells that have an operating range of -30C to 250C which far exceeds today's lipo technology. Furthermore these packs can be fully charged in about 3 minutes safely.

They have spectacular cold temperature performance. If that was not enough they can be charged/discharged 20,000 times as opposed to 100's like today's lipo technology.

Uses for this nano-based technology range from hybrid electric vehicles, cellphones, power tools, camcorders, laptops and, of course, electric flight! Imagine recharging for your next flight in 3-5 minutes? Imagine being able to fly in the snow with a cold pack that was sitting in your car? The possibilities are exciting here.

Some interesting stuff on the horizon . . .

You can read more on this technology on the company's website: www.altairnano.com ©

Editor, Jim Cook
@ Flare Out Publisher
1177 Polk Street
Shakopee, Minnesota 55379

Another Neat Workshop!



The final stop on the series of Workshop Tours was at the house of Rick Smith on April 15th. Several TCRC members got a chance to see how organized Rick really is. ☺

THE TCRC FLARE-OUT Monthly Newsletter



** TWIN CITY RADIO CONTROLLERS INC. **

Purpose: To preserve, encourage, and further develop the hobby of building and flying radio controlled model airplanes.

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