

Scheduling Software for the Patrol That Won't Be Scheduled

A High Tech Solution for a Low Tech Mountain

By: Robert Bible, Jr. and Jodi Bible

How do you schedule your patrol? How do you schedule your patrol if it is made up of patrollers who won't be told what to do? How do you schedule your patrol if you don't know when the mountain will be open? How do you make changes to your schedule? This article describes an online solution that the Mt. Baldy Patrol devised to solve our scheduling problems.

Background:

Mt. Baldy is located in Los Angeles, towering 10,000 feet above the surrounding city. With gorgeous views of the Mohave desert to the east and Catalina Island to the west it is a secret hidden in plain sight. Mt. Baldy is part of the San Gabriel Mountains, The San Gabriels are geologically young and still rising above the Los Angeles Basin, located to the west of the San Andreas fault, they are distinguished from the San Bernardino Mountains on the east side of the fault by steeper less geologically stable slopes.



Caption: Mt. Baldy is a little known resort located in the heart of Los Angeles. It features, old style lifts, steep runs and snow conditions that are dependant on Pacific storms originating in the Gulf of Alaska.

The Mt. Baldy Ski Patrol has been an integral part of the mountain for over 50 years. Old timers talk about rebuilding after the fires and management expects our help hanging

chairs, digging ditches and maintaining the mountain. The owners will not hesitate to tell you there would be no Mt. Baldy Ski Resort if there hadn't been a Mt. Baldy Patrol to help them through tough times.

Mt. Baldy still relies on the original two person center post chair lifts built in the 1950s. It has retained the charm and atmosphere of an old time ski hill. The hill makes only enough snow to extend the spring season by pushing snow to the bottom of the lifts so that we can get to the natural snow that has accumulated on the upper north faces.

Patrolling at Baldy is a unique experience and thus we attract unique patrollers. There is no running water in the patrol room. Ambulance access requires a 20-minute chair ride. Helicopter evacuations (we still call them airships) are the norm. There might be a running snowmobile and it might have gas or maybe not. All patrollers are required to carry 150' of self-evac line, and know how to use it. Over 90% of the mountain is advanced terrain. Mt. Baldy has the notorious distinction of being one of the few resorts that avalanches have claimed lives within the boundaries. Patrolling at Baldy is certainly not just another job.

Scheduling:

With a small patrol of all volunteers, scheduling has always been a problem. We sign up for our days in October during the On-the-Hill. Then, the work begins, someone has to compile the results, publish the calendar, notify people and make changes when you realize that you stupidly signed up on your wife's birthday. Then, republish the calendar, and then make more changes and then republish the calendar and so on. This is further compounded with a variable skiing season that can start as early as October or as late as January, and many times does not end until June. Recently, we had a year that we opened and closed 5 times.

Worst of all, this scheduling work has nothing to do with skiing. We have a strict rule in the patrol, if the ratio of hours skied to hours worked ever favors hours worked and not skiing then something is wrong.

A Solution:

We needed a solution. Here is what we wanted. It should be online and accessible to the whole patrol. It needs to be secure so that our information is not public. Patrollers need to be able to schedule and reschedule easily without creating work for someone else. We need to make sure that we have coverage. Patrollers should be emailed when they are scheduled. If there is a day without enough coverage, the whole patrol should be notified. In addition, this should all be automatic, so we can go skiing.



Jodi Bible
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January 2007 February 2007 March 2007

Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa
1	2	3	4	5	6		1	2	3					1	2	3				
7	8	9	10	11	12	13	4	5	6	7	8	9	10	4	5	6	7	8	9	10
14	15	16	17	18	19	20	11	12	13	14	15	16	17	11	12	13	14	15	16	17
21	22	23	24	25	26	27	18	19	20	21	22	23	24	18	19	20	21	22	23	24
28	29	30	31				25	26	27	28				25	26	27	28	29	30	31

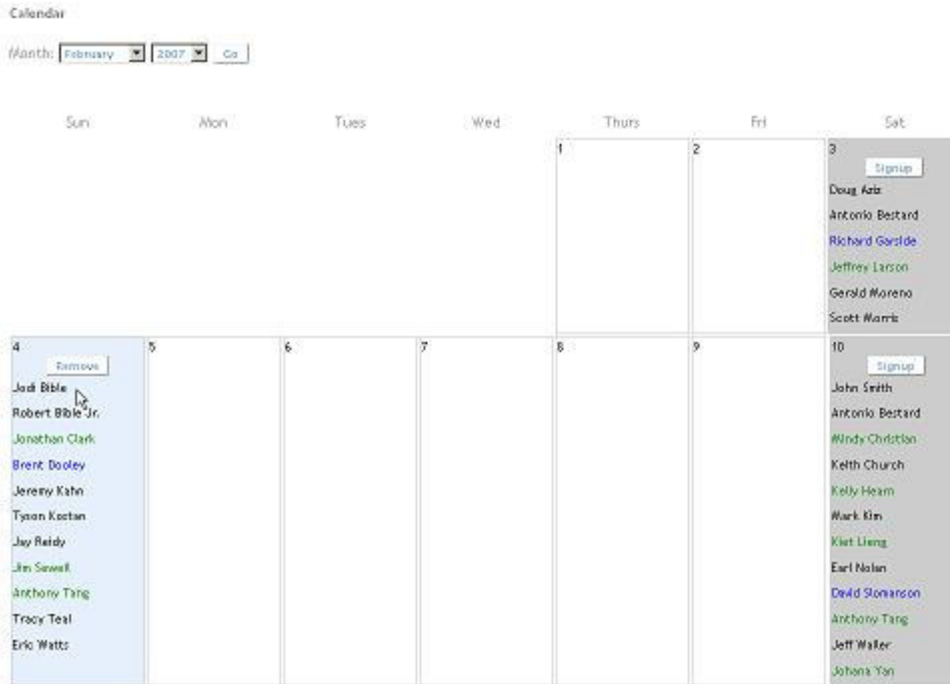
Signup for more days!

Caption: Once logged on the patroller can quickly see scheduled days highlighted in blue. An alarm announces that not the minimum number of days has not been met for January.

We searched for existing solutions and could not find anything. I then approached Aly Ibrahim who first wrote software for me when he was 14 years old. Now a Senior at UCLA, he volunteered to help the patrol. As can be seen from the pictures, all of our wants and then some have been incorporated.

How it Works:

The patrol member logs on with his self-assigned username and password. He/she immediately sees what days he/she is scheduled for throughout the entire season. By selecting a particular month, he/she can see who is scheduled when, and he/she can go to any day and remove himself/herself. Similarly, he/she can go to any day and add himself/herself.



Caption: As long as there are a minimum number of patrollers on the schedule a patroller can add or remove him/herself from the schedule. This flexibility give a sick patroller the option of moving days without sending a "blast" to the whole patrol.

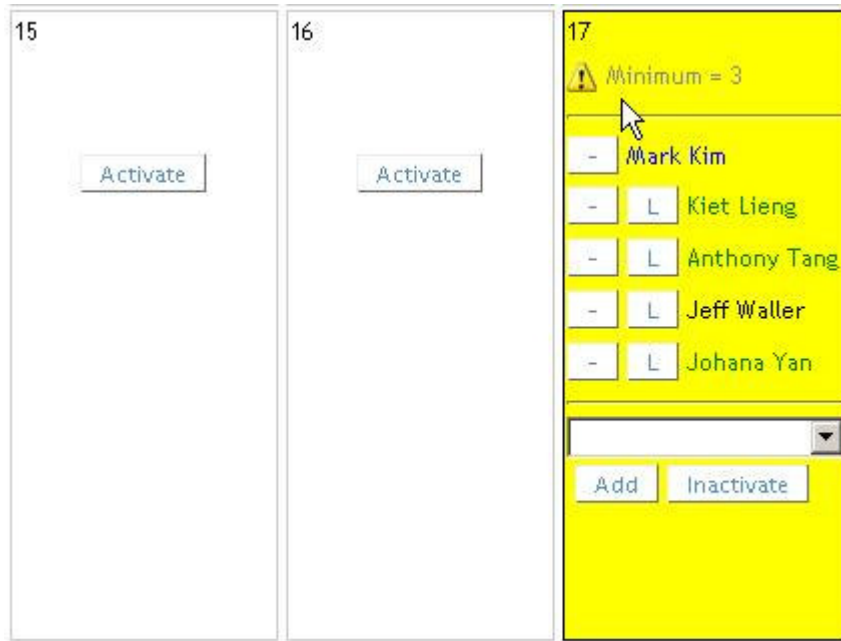
The Rules:

Our patrol doesn't like rules. We only have three scheduling rules. Everyone has a minimum number of days per month. They can't remove themselves if they aren't meeting the minimum number of days. Every day has a minimum number of patrollers, and thus you can't remove yourself and leave the day short without getting someone else to sign up. Finally, if you are not scheduled by the beginning of the month, the software schedules you to the lightest days.

Messages:

Every Tuesday email is sent to the patrollers scheduled within the next week. If there is a day without adequate coverage then everyone is emailed. If you aren't scheduled then you are notified that you have been scheduled.

Administrator:



Caption: The administrator uses interactive software to activate days and post patrollers to the schedule at the beginning of each season. In this example a warning shows that the minimum number of patrollers have not signed up. The lead patroller is highlighted blue, candidates are green.

If we could eliminate this, we would. The Administrator manages the patrol list and sets the days that we need people. These tasks are online with a simple interface.

The Future:

The software is written so that it can be expanded to handle multiple separate patrols.

Maybe we will tie in to the patrol login, to automatically notify people when they miss a scheduled day.

Nuts and Bolts:

Ask Aly. It is written in C# (C sharp) with .Net 2.0 and runs on a shared windows server currently on godaddy. The frustrating part of getting it all to work, was correctly installing all the components on the remote server.



Caption: Aly (seated at left shown with the authors) has been writing software for us since he was a freshman in high school. He is especially talented at graphical user interfaces. The authors shown with their daughter Johanna are basic patrollers at Mt. Baldy.

Skiing:

Come join us for a day of skiing. Visiting patrollers are welcome, see our website at mtbaldyskipatrol.com and look under “announcements”. It tells you what to do when you visit. If there is fresh snow don’t forget your avalanche transceiver.