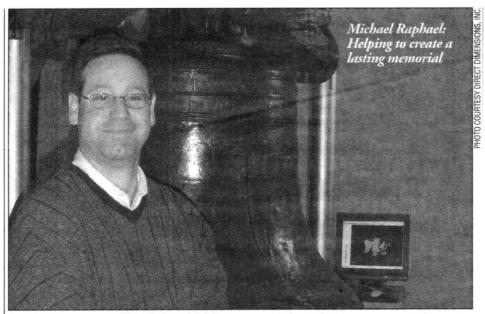
## **Baltimore Jewish Times**

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## **Scanning Freedom**

An Owings Mills engineer helps a French company create a replica of the Liberty Bell.

KAREN BUCKELEW Staff Reporter

ichael Raphael has *really* gotten into the Liberty Bell. In fact, Mr. Raphael, a 41-year-old Owings

Mills resident, knows just about everything there is to know about the 250-year-old national treasure — every chip on its surface, every flaw in its construction, every curve of its form.

But he's no history buff. Mr. Raphael, an engineer, nine years ago founded Owings Mills-based Direct Dimensions, an imaging firm that is using laser scanning technology to create three-dimensional, digital images of the roughly 2,000-pound bell.

A French company, the 300-year-old Cornille-Havard Bell Foundry in Normandy, is creating a replica of the bell to commemorate the 60th anniversary of the famous American landing at Normandy on June 6, 1944, during World War II.

The replica, ordered by the local Normandy government, is set for display in the Hall of the Regional Council in Caen, France, after a dedication this June.

In search of an accurate, detailed image of the bell to create exact blueprints, Cornille-Havard located Direct Dimensions through a company that

manufactures some of the equipment that the Owings Mills firm sells and also uses in its technology.

Direct Dimensions is no stranger to national monuments — it scanned the Lincoln Memorial in Washington shortly after Sept. 11, 2001.

When its work is finished, Direct Dimensions will be able to determine not only the exact physical characteristics of the Liberty Bell but what it was intended to sound like and exactly how it was made, said Mr. Raphael, a lifelong Beth Israel congregant.

The National Park Service, which maintains the bell at its home on Philadelphia's Market Street, is quite interested in the information, according to Mr. Raphael, and has met with the company to discuss the results. And the final result, the Normandy Liberty Bell, will be a tribute to the 9,000 Americans who died there 60 years ago, said Cornille-Havard's Paul Bergamo in a statement.

"The Normandy Liberty Bell," he said, "is a sounding memorial from the French to the American soldiers who gave their lives for our freedom."

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