The Long, Ongoing Dream of
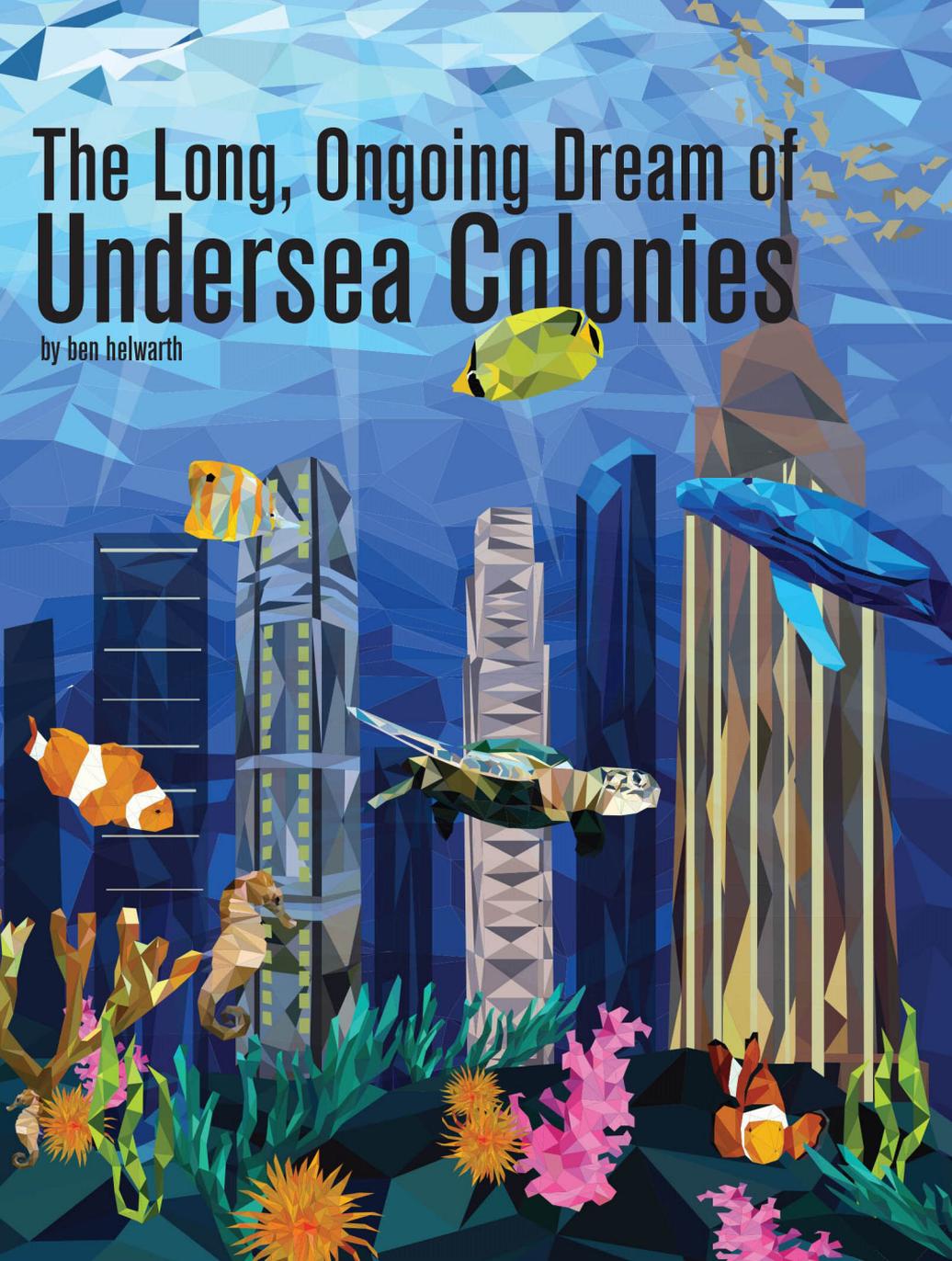# Undersea Colonies

by ben helwarth

Garre Christensen

Graphic Design

Note: Artist Statement & Index Not Provided

Figure 1: Book Cover: 1984.

Figure 2: Ben Franklin: Exercise Your Right To Vote, vote kite & key.

Figure 3: Ben Franklin: kite & key.

Figure 4: Holiday Beer Bash.

Figure 5: Jabba the Heart: Cardiovascular Research at CSU, Molecules, Models, and Mankind.

Figure 6: Mad Robot Creative.

Figure 7: Revolution: Game by kite & key, 1 (front).

It is three days before the shot heard around the world and the beginning of the American Revolution. Choose your side and recruit villagers for your army.

Object: Collect the most points by recruitng the most valuable villagers for your respective army.

Overview: Play is divided into three rounds, or "days". On each day, villagers are lined up to await the recruiters. Players take turns playing actions cards from their hands and then collecting villagers from the front of the line. At the end of the third day, whoever has the most points wins.

Setup: Shuffle each side's recruitment card deck separately, and then shuffle the villager deck. Deal each player 3 recruitment cards, and line up 4 villagers on the gameboard. The discard piles will be place to the side of the board.

Play: At the beginning of the first day, have someone take the top 4 villager cards and place them faceup in line on the gameboard. Choose someone to go first, and the play goes as follows:

Play a recruitment card (optional): Recruitment cards have different abilites to collect villager cards. If a recruitment card is not played, then collect only the first villager in line.

Collect the first Villager in line: Villagers are worth varying points, depending on the value of their profession to the army.

Draw a recruitment card, whether or not you played one this turn.
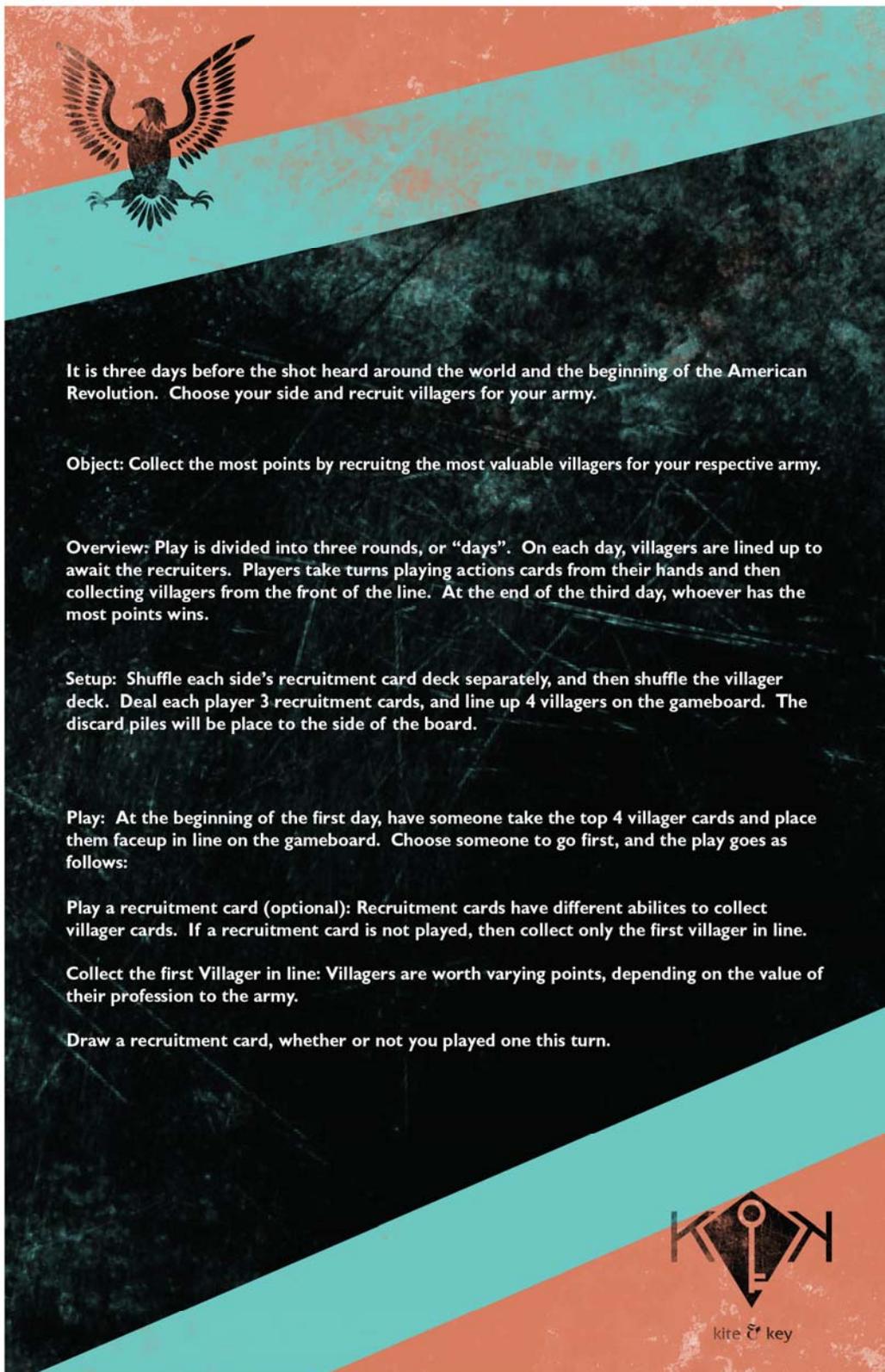
kite & key

Figure 8: Revolution: Game by kite & key, 2 (back).
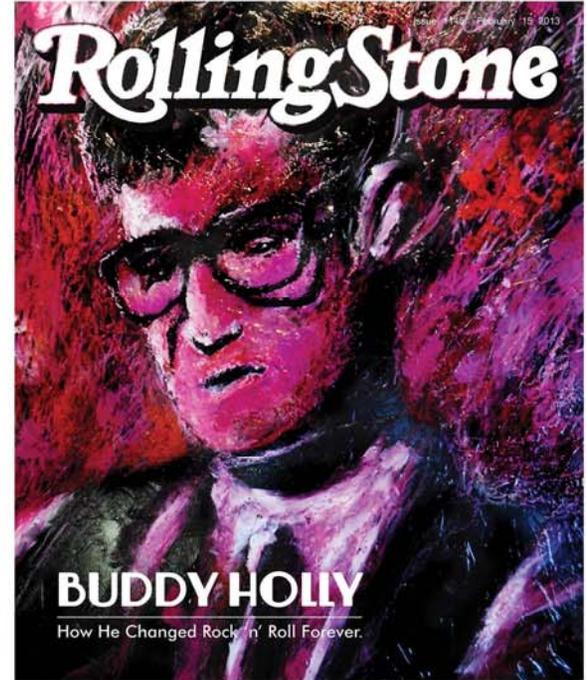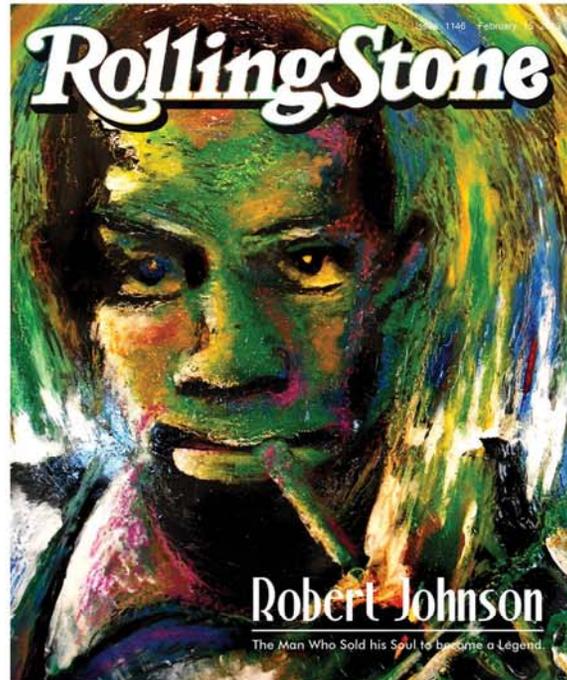
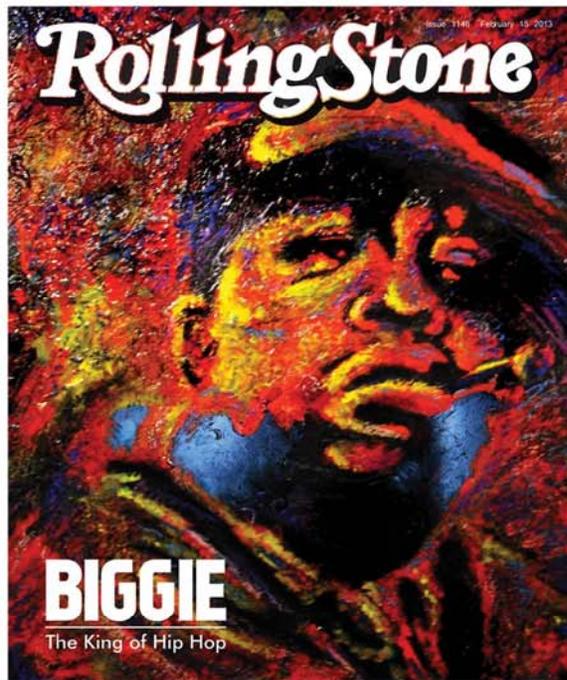**Figure 9: 3 Rolling Stone Covers: Biggie, Robert Johnson, & Buddy Holly.**

Figure 10: Undersea Colonies (magazine layout).
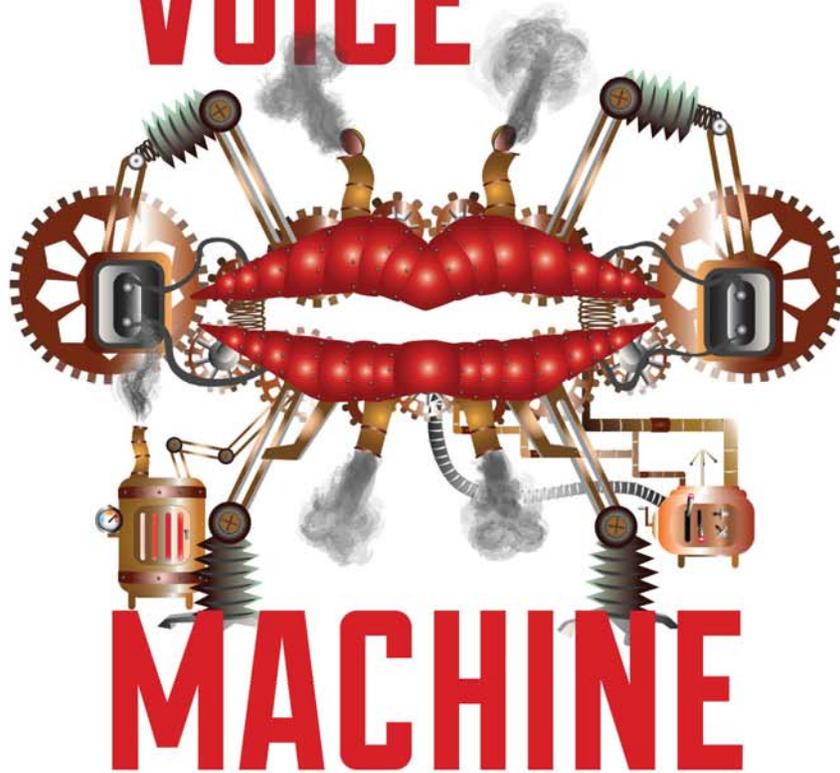
THE VOICE IN THE MACHINE

IS LIFELIKE SYNTHETIC SPEECH FINALLY WITHIN REACH?

BY ARNIE COOPER

Ever since the Voder, Bell Labs' artificial-voice machine, blurted out a barely intelligible "Good evening, radio audience …" at the 1939 New York World's Fair, voice engineers have been striving to generate lifelike synthetic speech. Unlike today's automated systems, the Voder needed an operator who knew which keys to press to elicit "speech" that, for all its marvels, sounded like it was coming from a tuba rather than a human being.

Scientists continued refining their synthetic voices through the 1960s. In the 1970s, advances in computers ironically brought human voices back into the mix, with digital recorded speech providing canned audio responses. Researchers began chopping up dialogue into the smallest units of speech, phonemes, and using software programs to re-form those bits into words, phrases, and sentences. Unfortunately, such utterances sounded pretty much the way "re-formed" chicken nuggets taste. Since the mid-1990s, expanding "digital libraries" have allowed for storage of more phonemes that could be split into even smaller units, adding authenticity to the "voice." But even today's state-of-the-art systems, like AT&T's Natural Voices, still don't capture the range of human emotion.

That's exactly what Gershon Silbert, a 61-year-old former concert pianist and the CEO of VivoText, an Israeli start-up he founded in 2008, hopes to achieve. VivoText's text-to-speech engine draws on two pieces of technology: a proprietary voice-sample database that enables the portrayal of "emotion"; and software that Silbert devised to generate virtual-music performances that capture the expressiveness of professional musicians.

Silbert began dabbling in the field during the mid-1990s, ultimately creating his Music Objects Recognition technology for making computer-generated music performances that sounded human. But making money from that technology proved difficult.

"Venture capitalists saw this as a very small niche market, not really worth funding," he told me. "But what came out in conversations was the idea of applying it to text-to-speech. I figured, If that's what people want, why not do it?" His company targets electronic publishing, specifically the audio-book market, which currently comprises a meager percentage of the hundreds of thousands of new titles published in the U.S. each year.

While Silbert acknowledges that VivoText is not about to compete with Derek Jacobi reading Shakespeare, he says that for informational or technical books, his relatively mellifluous text-to-speech engine will do just fine. The same goes for other voice-supported platforms like toys and games, GPS navigation, and SMS and e-mail reading. Though Silbert won't say which of those platforms will first use VivoText, the company plans to launch its first product roughly in time for you to not just read this, but hear it—and, he hopes, with F-E-E-L-I-N-G.

DESIGN AND ILLUSTRATION
BY GARRETT CHRISTENSEN

— the Atlantic —

0 9 8   0 9 9

Figure 11: The Voice In The Machine (magazine layout).