

Editors

John Pugh and Paul White Carleton University & The Object People

SIGS Publications Advisory Board

Tom Atwood, Object Design François Bancilhon, O2 Technology Grady Booch, Rational George Bosworth, ParcPlace-Digitalk Jesse Michael Chonoles, Lockheed Martin ACC Stuart Frost, SELECT Software Adele Goldberg, ParcPlace-Digitalk Thomas Keffer, Rogue Wave Software R. Jordan Kriendler, IBM Consulting Group Thomas Love, Consultant Bertrand Mever, ISE Meilir Page-Jones, Wayland Systems Cliff Reeves. IBM Bjarne Stroustrup, AT&T Bell Labs Dave Thomas, Object Technology International

The Smalltalk Report **Editorial Board**

Jim Anderson, ParcPlace-Digitalk Adele Goldberg, ParcPlace-Digitalk Reed Phillips Mike Taylor, ParcPlace-Digitalk Dave Thomas, Object Technology International

Columnists

Jay Almarode, GemStone Systems Inc. Kent Beck, First Class Software Juanita Ewing, ParcPlace-Digitalk Bob Hinkle. Consultant Tim Howard, FH Protocol, Inc. Ralph E. Johnson, *University of Illinois* Alan Knight, The Object People Mark Lorenz, Hatteras Software, Inc. Jan Steinman, Bytesmiths Rebecca Wirfs-Brock, ParcPlace-Digitalk Barbara Yates, Bytesmiths

SIGS Publications Group, Inc.

Richard P. Friedman, Founder, President, and CEO Hal Avery, Group Publisher John McCormick, Editorial Director

Editorial/Production

Kathleen M. Major, Managing Editor Elisa Varian, Director of Manufacturing Seth J. Bookey, Assistant Managing Editor Dan Olawski, Production Editor Sue Mycka, Desktop Designer and Cover Design Margaret Conti, Advertising Production Coordinator

Circulation

Elayne Glick, Circulation Director Lawrence E. Hoffer, Director, New Business Development Byron Scarlett, Assistant Circulation Manager

Advertising/Marketing

Gary Portie, Advertising Manager, East Coast/Canada/Europe Elisa Marcus, Advertising Manager, Central US Michael W. Peck, Advertising Representative Kristine Viksnins, West Coast Exhibit Sales Sarah Olszewski, East Coast Exhibit Sales 212.242.7447 (v), 212.242.7574 (f)

Diane Fuller & Associates, Sales Representative, West Coast 408.255.2991 (v), 408.255.2992 (f)

Nancy Beuschel, Promotions Manager for Magazines

Administration

Margherita R. Monck, General Manager David Chatterpaul, Senior Accounting Manager Bibi Budhram, Accounts Payable



Publishers of Journal of Object-Oriented PROGRAMMING, OBJECT MAGAZINE, C++ REPORT, THE SMALLTALK REPORT, THE X JOURNAL, JAVA REPORT, OBJECT CURRENTS (ONLINE), THE X SPOT (ONLINE), OBJECT EXPERT (UK), and **OBJEKT SPEKTRUM (GERMANY)**

Table of Contents

June 1996 Vol 5 No 8

4

7

20

24

27

Features

Smalltalk SQA: What to test?

Jeff McKenna

The need to develop processes and tools for software without sacrificing high productivity is discussed.

A strategy for using instance variables **Bobby Woolf**

Bobby presents some guidelines for using instance variables cleanly and effectively. This helps improve commonly written code for initialization, accessing, equality, persistence, and application layers.

Controlling image size when using GemStone 12 John Bentley

Controlling image size is important. These various replication schemes can aid in performance optimization.

Tactical patterns for the real world: 18 **Optimization patterns**

Darrow Kirkpatrick

The third and final article in the series on patterns for working with domain models presents patterns for dealing with optimization issues—handling Smalltalk objects that must perform well, while incorporating extra levels of indirection to be persistent or transient.

Columns





Managing Objects Documents on the Web Jan Steinman & Barbara Yates The Web can be a powerful communication

tool, but like all tools, it can be misused. Steinman & Yates demonstrate techniques





Smalltalk Solutions Alan Knight

Knight reviews the recent Smalltalk Solutions Conference and his impressions of the Smalltalk industry.

Getting Real Multi-user canonicalization

Jay Almarode

Almarode demonstrates one approach for solving the problem of canonicalization of objects using multi-user

Departments

Editors' Corner 2

The Smalltalk Report (ISSN# 1056-7976) is published 9 times a year, monthly except in Mar-Apr, July-Aug, and Nov-Dec. Published by SIGS Publications Inc., 71 West 23rd St., 3rd Floor, New York, NY 10010. © Copyright 1996 by SIGS Publications. All rights reserved. Reproduction of this material by electronic transmission, Xerox or any other method will be treated as a willful violation of the US Copyright Law and is flatly prohibited. Material may be reproduced with express permission from the publisher. Bulk rate U.S. postage paid Lancaster, PA, permit 161. Canada Post International Publications Mail Product Sales Agreement No. 290386.

Individual Subscription rates 1 year (9 issues): domestic \$89; Mexico and Canada \$114, Foreign \$129; Institutional/Library rates: domestic \$199, Canada & Mexico \$224, Foreign \$239. To submit articles, please send electronic files on disk to the Editors at 885 Meadowlands Drive #509, Ottawa, Ontario K2C 3N2, Canada, or via Internet to streport@objectpeople.on.ca. Preferred formats for figures are Mac or DOS EPS, TIF, or GIF formats. Always send a paper copy of your manuscript, including camera-ready copies of your figures (laser

POSTMASTER: Send domestic address changes and subscription orders to: The Smalltalk Report, P.O. Box 5050, Brentwood, TN 37024-5050. For service on current domestic subscriptions call 1.800.361.1279 or fax 615.370.4845. Email: subscriptions@sigs.com. For foreign subscription orders and inquiries phone +44(0)1858.435302. PRINTED IN THE UNITED STATES.

June 1996 1