HOME DELIVERY: FABRICATING THE MODERN DWELLING PRESENTS THE MOST THOROUGH EXAMINATION TO DATE OF HISTORICAL AND CONTEMPORARY PREFABRICATED ARCHITECTURE

Two-Part Exhibition Includes Historical Survey of Prefabricated Houses in a Museum Gallery and Five Full-Scale Contemporary Houses in the Outdoor Space West of MoMA

Home Delivery: Fabricating the Modern Dwelling
Home Delivery, Part I: The International Council of The Museum of Modern Art Gallery, sixth floor, July 20–October 20, 2008
Home Delivery, Part II: outdoor space to the west of the Museum (entrance at 54th Street between Fifth and Sixth Avenues), July 20–October 26, 2008

NEW YORK, July 14, 2008—*Home Delivery: Fabricating the Modern Dwelling* offers the most thorough examination to date of both the historic and contemporary significance of factory-produced architecture from 1833 to today. The long history of prefabricated housing is presented in a gallery exhibition of some 60 projects represented by drawings, ephemera, models, photographs, patent applications, films, computer animations, and partially assembled full-scale houses, as well as four new commissions of wall fragments that could be used in designing prefabricated buildings. In the outdoor space to the west of the Museum, five contemporary architectural firms have been invited by MoMA to display full-scale, prefabricated houses which attest to the popularity and innovation of factory-produced architecture today. The exhibition is on view July 20 through October 20, 2008 (through October 26, 2008, for the outdoor component), and is organized by Barry Bergdoll, The Philip Johnson Chief Curator of Architecture and Design, with Peter Christensen, Curatorial Assistant, Department of Architecture and Design, The Museum of Modern Art.

Home Delivery is a survey of prefabrication, a dream of modernist architects since the turn of the twentieth century. Today, with increasing concern for issues such as sustainability and a swelling global population, prefabrication has taken center stage as a prime solution to a host of pressing needs, and continues to spur innovative manufacturing and imaginative design. This exhibition traces the major driving forces of the avant-gardes of the 1920s and 1930s, which have episodically returned to the forefront in every new dialogue about architecture's relationship with serial production: in the golden decade after World War II, with its economic prosperity and baby boom and corresponding housing shortage; in the 1960s with the introduction of new materials; and again in the past decade as the capacity of the computer has dramatically changed the climate of production.

Mr. Bergdoll explains, "In architecture, the history of prefabrication is, in some senses, the history of modernism. The prefabricated house continues to be one of architecture's most radical pursuits. Prefabrication is a reflection on the house as a critical agent in the discourse of sustainability, architectural invention, and new formal research."

The houses erected in the outdoor space at MoMA are designed by Kieran Timberlake Architects (Philadelphia, Pennsylvania); Lawrence Sass (Cambridge, Massachusetts); Jeremy Edmiston and Douglas Gauthier (New York, New York); Oskar Leo Kaufmann and Albert Rüf of Oskar Leo Kaufmann Architects (Dornbirn, Austria); and Richard Horden (London, England, and Munich, Germany) with architects Lydia Haack + John Höpfner, (Munich, Germany). The sixth-floor galleries also display four new commissions: fragments of Water Block House (2007) by Kengo Kuma (Tokyo), and three fragments of digitally fabricated walls by the architecture firms Reiser Umemoto (New York), Contemporary Architecture Practice (Philadelphia), and Marble Fairbanks (New York).

***HOME DELIVERY*, PART I**

The International Council of The Museum of Modern Art Gallery, sixth floor

The exhibition begins in the early nineteenth century, when factory-produced buildings and building components became integral to the rapid development of the American heartland and the colonial empires of Britain and France. The exhibition comprises five loosely chronological sections and includes historical documents, full-scale reassemblies, and films. It traces the roots of prefabrication in the work of such architects as Frank Lloyd Wright, Jean Prouvé, Konrad Wachsmann, Marcel Breuer, Kisho Kurokawa, and Richard Rogers. In addition to individual architects' creations, the exhibition highlights projects by corporations such as Lustron, Sears Roebuck & Co., and Deutsche Kupferhaus, as well as the imaginative systems of other influential figures, including Thomas Edison and R. Buckminster Fuller.

A New Architecture Primer

The exhibition begins with a display of ephemera—patents, sales brochures, propaganda, replacement parts, and toys. These materials chart the history of the prefabricated house through both its euphoric triumphs and its marked failures, as architects have grappled with the resistance of clients and manufacturers to accept a new level of architectural innovation. In 1833, a London carpenter named H. Manning designed, manufactured, and packaged a cottage for British colonists settling in Australia (paralleling the invention of the balloon frame in the United States). Manning's Portable Colonial Cottage, represented in the exhibition through advertisements in both British and Australian newspapers, is one of the earliest visually documented replicable homes. Also included are newspaper ads for kit homes designed by Sears, Roebuck & Co. and E. F. Hodgson Company in the 1930s.

Prefabrication and the Spirit of Invention

Focusing on the period between 1906 and 1942, this section of the exhibition highlights architectural experiments in the pre-war period, including early examples in steel shown in the Chicago World's Fair, such as the Crystal House (1933) by George Fred Keck. Bookends of this section are a model of Thomas Edison's Single Pour Concrete House System (1906), and drawings, photographs, and objects representing Konrad Wachsmann and Walter Gropius's General Panel System (1942). These two projects epitomize the spirit of architectural invention that took hold between the turn of the twentieth century and World War II, and all are explicitly intended for replication, though none succeeded at a significant scale.

Prefabrication and Necessity

The next section of the exhibition contains artifacts of key projects from the years 1942 to 1956. After World War II, a massive demand for new housing fueled the manufactured-housing industry as never before. Steel had become the primary material for building. Two full-scale partial building reassemblies in the exhibition—a Lustron Westchester Two Bedroom (1948) and Jean Prouvé's Maison pour L'Institutrice (1949)—illustrate two different approaches to the steel prefabricated house.

It was during this period that Philip Johnson, then director of the Department of Architecture and Design at The Museum of Modern Art, initiated the short-lived *House in the Garden* exhibition program at MoMA. For this series, contemporary practitioners were periodically invited to build full-scale homes in The Abby Aldrich Rockefeller Sculpture Garden; the full-scale houses in Part II of *Home Delivery* renew this tradition. The houses from the original *House in the Garden* program—including The House in the Museum Garden (1949), Marcel Breuer's iconic butterfly-roofed Museum House in MoMA's garden; Gregory Ain's Exhibition House (1950); and the Japanese Exhibition House (1954–55)—are represented in *Home Delivery* with wall-sized photographs.

Prefabrication and Experimentation

Over 20 architectural models, from 1943 to 2002, illustrate the fecund experimentation of the postwar period. The 1950s were marked by groundbreaking research in plastics, followed by the explosion in popularity of precast and prestressed concrete panel systems in the 1960s and 1970s. Interest in megastructures blossomed, and though the vast majority of project designs were never realized, the ideas are exemplified here by Archigram's utopian proposals for a Plug-In City (1962) and a Living Pod (1965), and Kisho Kurokawa's Nakagin Capsule Tower (1972).

Prefabrication, Fabrication, and Postfabrication in the Digital Era

The advent of computer-software design programs coupled with innovation in laser cutting and

three-dimensional printing hardware technology has sparked a flurry of experimentation in recent years. The architects in the final section of the exhibition have turned their attention to architectural infrastructures for improvised building, computer algorithms that configure forms around a set of parameters particular to each client, and building blocks and inhabitable units whose potential configurations are nearly endless. Recently, a renewed interest in manufactured housing has inspired a wealth of impressive homes, both prototypical and commercially successful, including proposals using shipping containers like the Container Houses (1994) by Wes Jones.

Outside the gallery on the sixth floor are three additional special commissions for the exhibition: fragments of walls that could potentially be used in designing prefabricated buildings, by Reiser Umemoto, Contemporary Architecture Practice, and Marble Fairbanks. These designers explore the future potential of the relationship between industry and the computer-based design of today.

***HOME DELIVERY*, PART II**

Outdoor space to the west of the Museum
(Entrance at 54th Street between Fifth and Sixth Avenues)

To the west of the Museum, five full-scale, prefabricated contemporary houses have been installed on a vacant lot. These structures represent the burgeoning fields of parametric design and digital fabrication, technological innovations that have resulted from the union of traditional focus on cost and speed with the unleashed creativity of designers and individual clients. Today, prefabricated houses are back in the spotlight, benefiting from new architectural sophistication, design complexity, and absolute precision.

The five projects were chosen after an initial consideration of some 500 architects and firms, from which 21 proposals were solicited. The proposals were evaluated by a jury of internal Museum curators and staff, as well as invited architects, who advised the curatorial team in making the selections. The five houses represent designs by emerging and established architects, different styles of homes that use varied manufacturing techniques, and houses that span the economic market. Cooper Robertson Partners acted as consulting architects in assembling the houses for the exhibition. F. J. Sciame Co. served as construction manager.

The architects participating in *Home Delivery* are presenting commercially viable domestic creations, prototypes, and entirely new designs produced specifically for the exhibition. The selected designs showcase a variety of approaches to prefabrication. These include a green urban dwelling made of recyclable materials, by Kieran Timberlake Architects; a section of a multistory house with floors that fit into shipping containers and can stack together like blocks, by Oskar Leo Kaufmann and Albert Rüf; a digitally fabricated house for New Orleans to help those displaced by Hurricane Katrina, by M.I.T. professor Lawrence Sass; a house built from a computer program

that automates a blueprint, by Jeremy Edmiston and Douglas Gauthier; and a tiny cube intended for use as temporary housing, by Richard Horden, Lydia Haack and John Höpfner.

Kieran Timberlake Architects: Cellophane House

The Cellophane House was designed in 2007 specifically for *Home Delivery*, with aluminum frames that snap together, glass windows that slide into place, and sustainable energy systems. The Cellophane House is intended as a prefabricated solution for an urban dwelling. Requiring no welding or sealing, it is made of recyclable materials and equipped with photovoltaic cells that allow it to be off-grid and energy efficient.

Kieran Timberlake Architects, based in Philadelphia, Pennsylvania, is led by partners Stephen Kieran and James Timberlake.

Oskar Leo Kaufmann and Albert Rüf: System3

System3 is an austere and elegant structure designed in 2007 specifically for MoMA's *Home Delivery* exhibition. Displayed here as a house, System3 can also be an apartment building of multiple stories, each of which can serve as a complete living unit. Just one possible configuration of the house, a single story, is displayed at MoMA. Each story of the house fits perfectly inside a shipping container for easy transporting, and the stories are stacked together like blocks for assembly. Offering a more refined alternative to many American manufactured houses, the System3 uses both modular and flat-pack elements.

Austrian architect Oskar Leo Kaufmann established an office for architecture with Albert Rüf in 2001 in Dornbirn, Austria, designing office and industrial buildings, single-family houses, and hotels in Austria, Germany, Japan, and the United States. For the past 10 years, the architects have been actively developing building systems and prefabricated prototypes.

Lawrence Sass: Digitally Fabricated Housing for New Orleans

A project intended to help with rehousing those displaced by Hurricane Katrina, the Digitally Fabricated Housing for New Orleans was designed as a prototype in 2006. It consists of laser-cut plywood panels with grooves and joints that allow each piece to fit neatly into the next without nails or hinges. The house's filigree is designed to reflect the local architecture of New Orleans, but could be adapted for other locations.

Architect Lawrence Sass is a designer, researcher, and teacher at the Massachusetts Institute of Technology (M.I.T.) in Cambridge. His work explores the relationships among design, computing, and digital fabrication. Current research projects explore a range of interests in digital fabrication, specifically by the study of digitally fabricated wood and concrete homes. His research is centered on the advent of design systems structured around digital fabrication.

Jeremy Edmiston and Douglas Gauthier: Burst*008

Designed to be assembled on site from laser-cut pieces, the Burst house is a computer-designed remake of the typical prefabricated box. Working from a formula that automates on the computer the specific pieces needed to create the house desired, the project is based on a system that can be adapted to a changing set of criteria. The 2003 prototype of the Burst*003 project, built on Australia's northeast coast, won the Royal Australian Institute of Architects 2006 Wilkinson award; Burst*008 is a prototype developed for MoMA.

Jeremy Edmiston, originally from Australia, has been practicing, teaching and researching architecture in New York City for 16 years. His practice is based in re-evaluating the relationship between the built and natural environments in all its permutations. Douglas Gauthier is a New York–based architect whose work focuses on the structural, programmatic, and environmental parameters that influence architecture.

Horden Cherry Lee Architects/Haack + Höpfner Architects: micro compact home

An aluminum-clad, perfectly cubic form measuring approximately 76 square feet, the micro compact home is a tiny dwelling intended for use as athletic or student housing, or as a miniature vacation house. It is commercially available and recently went on the market in Europe. Deliverable by helicopter or crane, the tiny house is entirely portable. Its interior is fully equipped with modern amenities, and its exterior features both a roof topped with photovoltaic panels and a wind turbine, allowing the house to function off grid.

Architect Richard Horden is a founding partner of the London-based firm Horden Cherry Lee Architects. Since the 1970s, both the firm and the architect have been committed to achieving more with less, optimizing visual and technical lightness with a minimal use of materials. Horden initiated research on the micro compact home (mch) with a team of students and collaborators as a professor at the Technical University in Munich.

Lydia Haack and John Höpfner of Haack + Höpfner Architects are an architectural team working in Germany and the United Kingdom. They worked in London for many years and taught at various architecture schools. Their projects range in scale from large industrial buildings to experimental housing and interior and product design.

SPONSORSHIP:
The exhibition is the fifth in a series of five exhibitions made possible by The Lily Auchincloss Fund for Contemporary Architecture and is also generously supported by The Rockefeller Foundation and by Jerry I. Speyer and Katherine G. Farley.

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Media sponsorship is provided by *Metropolitan Home* Magazine.

PUBLICATION:

The accompanying publication, *Home Delivery: Fabricating the Modern Dwelling* by Barry Bergdoll and Peter Christensen, features essays by Mr. Bergdoll, The Philip Johnson Chief Curator of Architecture and Design at MoMA; Rasmus Wærn, architect and critic; and Ken Tadashi Oshima, historian and assistant professor of architecture at the University of Washington. Its plate section presents 63 realized and unrealized architectural projects, including building systems, paradigms, and architectural toys such as LEGOs and Lincoln Logs. Projects are organized chronologically by the date of their design, and each entry is accompanied by a selection of key images, such as plans, drawings, renderings, and photographs, that document construction processes and finished buildings. Brief descriptive essays by Peter Christensen, Curatorial Assistant, Department of Architecture and Design at MoMA, and expert guest contributors provide background and insight on each of the projects. *Home Delivery: Fabricating the Modern Dwelling* is published by The Museum of Modern Art and is available at MoMA Stores and online at www.momastore.org. It is distributed to the trade through Distributed Art Publishers (D.A.P) in the United States and Canada, and through Thames + Hudson internationally. Hardcover, 9 ½ x 11 inches; 248 pages; 423 illustrations. Price: $45.00.

PROGRAMS:

The Cases of Japan and Scandinavia: A Panel Discussion
Thursday, July 17, 6:30 p.m.
The Urban Center, 457 Madison Avenue

Exhibition catalogue contributors Ken Tadashi Oshima and Rasmus Waern present "Postulating the Potential of Prefab: The Case of Japan" and "Prefab as a Model of Society." The lectures consider the historical, cultural, and contemporary use, understanding, and significance of prefabricated housing in Japan and the Nordic countries. Barry Bergdoll, The Philip Johnson Chief Curator, Department of Architecture and Design, MoMA, introduces the evening. Peter Christensen, Curatorial Assistant, Department of Architecture and Design, MoMA, moderates a discussion. This program is a collaboration between the Architectural League of New York and The Museum of Modern Art and is in conjunction with the *Home Delivery* exhibition.

Admission is free for League or MoMA members; $10 for all others. League or MoMA members may make reservations by e-mailing rsvp@archleague.org. MoMA members must present their membership cards to receive free admission. For more information, call 212.753.1722 x13. AIA and New York State continuing education credits are available.

PopRally Presents *Home Delivery* House Party
Saturday, July 19, 7:00–10:00 p.m.
Outdoor space to the west of the Museum. Enter at 54th Street

PopRally, a program of events at The Museum of Modern Art and P.S.1 Contemporary Art Center, presents a preview of the exhibition's outdoor component. Visitors can explore the five contemporary prefabricated houses inside and out, and dance to the tunes of DJs Tropical Jeremy and Matthew Radune. Treats from favorite New York City street-food vendors will be available for purchase.

Tickets are $6 in advance and $8 at the door, and are available online and at the Museum Film and information desks. Guests must be twenty-one or older to attend this event. http://moma.org/calendar/poprally/. PopRally would like to thank Grolsch and Fred for their sponsorship.

Open House
Select days at 3:30 p.m.
To complement the wide variety of historical and contemporary designs and models of prefabricated architecture featured in MoMA's galleries, the architects and designers featured in Part II of *Home Delivery* lead the public through their full-scale projects in the lot to the west of the Museum. Groups (limited to 25 people) meet in front of Robert Motherwell's *Open Number 17 (in ultramarine with charcoal line)* in The Agnes Gund Garden Lobby of the Museum.
August 25: Douglas Gauthier and Jeremy Edmiston lead the public through Burst*008.
September 25: Lawrence Sass, Associate Professor, Massachusetts Institute of Technology, leads a tour through his Digitally Fabricated Housing for New Orleans.
October 15: James Timberlake, fellow of the American Institute of Architects and partner of Kieran Timberlake Associates, lead the public through their Cellophane House.

Tickets ($5; members, students, seniors, and staff of other museums $3) can be purchased at the lobby information desk, the Film desk, or online at www.moma.org/thinkmodern.

Brown Bag Lunch Lectures
Monday, September, 22, and Thursday, September 25, 12:30–1:15 p.m.
Classroom B, 4 West 54th Street
This lecture provides an overview of *Home Delivery: Fabricating the Modern Dwelling*. Lecturer Peter Christensen is a curatorial assistant in the Department of Architecture and Design at MoMA, and a co-organizer of the exhibition.

Tickets ($5; members, students, seniors, and staff of other museums $3) can be purchased at the lobby information desk, at the Film desk, or in the Education and Research Building lobby. Tickets are also available online at www.moma.org/thinkmodern. Guests may bring their own lunches. An induction loop sound amplification system is available for all Brown Bag Lunch Lectures.

Home Made: Five Perspectives on Prefabrication
Wednesday, October 15, 6:30 p.m.
Theater 2, 11 West 53 Street
Many architects throughout the twentieth century have focused their creative energies on the development of design for prefabricated structures. From domestic dwellings to imaginative prototypes, the possibilities for living in the modern world are vast. In this panel, five architects whose work is exhibited in *Home Delivery* make brief presentations on their vision and practice. They include: James Timberlake, fellow of the American Institute of Architects and partner of Kieran Timberlake Associates, Philadelphia; Lawrence Sass**,** Associate Professor, Massachusetts Institute of Technology; Oskar Leo Kaufmann, Oskar Leo Kaufmann & Albert Rüf; Douglas Gauthier and Jeremy Edmiston, New York; and Richard Horden, Horden Cherry Lee Architects, London.

Tickets ($10; members $8; students, seniors, and staff of other museums $5) can be purchased at the lobby information desk, the Film desk, or online at www.moma.org/thinkmodern.

MoMA AUDIO:
Hear commentaries by curators Barry Bergdoll and Peter Christensen on Part I, the contextual section of *Home Delivery* in the sixth-floor galleries. For *Home Delivery,* Part II, dial (646) 205-7614 using your cell phone to hear commentaries by Jeremy Edmiston, Douglas Gauthier, Lydia Haack, Oskar Leo Kaufmann, Lawrence Sass, and James Timberlake, architects of the prefabricated houses on the lot west of the Museum. MoMA Audio is available free of charge at the Museum and on www.moma.org/audio and iTunes. MoMA Audio is a collaboration between

The Museum of Modern Art and Acoustiguide, Inc. MoMA Audio is available free of charge courtesy of Bloomberg.

EXHIBITION WEB SITE:
The exhibition Web site, which launched in April at www.moma.org/homedelivery, has included weekly diary postings from each of the five architects whose full-scale prefab houses are displayed on the lot to the west of the Museum, and from the curators and collaborators of the exhibition, recording the process of fabricating, delivering, and assembling the houses leading up to the opening of the exhibition. The installation journal offers a behind-the-scenes look into the entire process of creating and erecting prefabricated architecture. Upon completion of the contemporary projects at MoMA, the Web site expands to encompass a timeline of all of the projects in the exhibition, which includes pivotal works from nearly two centuries of prefabricated homes. The site underlines the importance of prefabrication as a matter of process and product. The team at Flat (www.flat.com) designed and built the site.

EXHIBITION AT P.S.1:
The Museum of Modern Art and P.S.1 Contemporary Art Center's ninth annual *MoMA/P.S.1 Young Architects Program* is a project installed in the outdoor courtyard of P.S.1 called P.F.1 (Public Farm One) by WORK Architecture Company from New York. P.F.1 is an urban farm concept made from inexpensive and sustainable materials. The structure is recyclable after its use at P.S.1. It is on view in P.S.1's outdoor courtyard until September 14, and serves as an interactive environment for the 2008 *Warm Up* summer music series, which is held at P.S.1 every Saturday from 3:00 to 9:00 p.m. through September 6, 2008. Visit www.ps1.org for more information. There will be an exhibition at MoMA of the designs created by the five finalists for the competition, in the Louise Reinhardt Smith Gallery on the third floor from July 23 to October 20, 2008.

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For downloadable high-resolution images, please register at www.moma.org/press.

Public Information:
The Museum of Modern Art, 11 West 53rd Street, New York, NY 10019
Hours: Wednesday through Monday: 10:30 a.m.-5:30 p.m. Friday: 10:30 a.m.-8:00 p.m.
Closed Tuesday.
During July and August, the Museum is open to the public until 8:45 p.m.
The public may call 212/708-9400 for detailed Museum information.
Visit us on the Web at www.moma.org.